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### Special Articles—

- Census 1986—A Portrait of Australia (pages 122-124).
- 1983 Crime Victims Survey (pages 240-243).
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- Australia and Comet Halley, 1985-86 (pages 657-658).
- Australia Prepares for its Bicentenary (pages 691-694).

### Pictorials—

- Frontispiece—an aerial view in colour of the New Parliament House under construction in Canberra, with the present Parliament House in the foreground.
- Colour photographs commemorating the 75th Anniversary the Royal Australian Navy and other notable events (facing page 46).
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- Endpapers depicting further progress on Australia's new Parliament House.

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  - Results of the September 1984 Retirement Intentions Survey (page 155).
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  - Statistics relating to ownership and control of enterprises in Australia (page 629).
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## PREFACE

The Year Book is the principal reference work produced by the Central Office of the Australian Bureau of Statistics (ABS). It provides a comprehensive and detailed statistical review of all aspects of the economy and social conditions of Australia. In addition, it contains descriptive matter dealing with Australia's history, geography, physiography, climate and meteorology, government, defence, international relations, culture and environment.

The first Official Year Book was published early in 1908. This is the seventieth Year Book issued under the authority of the Commonwealth Government and follows a similar pattern to previous editions. However chapters have been revised and new material has been added. Readers are referred to *Features of this Issue* listed on the facing page for new material included in this edition. In the various chapters of the Year Book, and in the list on page 744 preceding the general index, there are references to special articles, background material and items of historic interest which have appeared in previous issues.

Most of the statistics contained in this volume relate to the years ended June or December 1984 or 1985. More detailed, and in most cases more recent, statistics are available in other ABS publications. The more significant of these publications are listed at the end of the relevant chapters of the Year book; the ABS Catalogue of Publications (1101.0) lists all current publications of the ABS.

My thanks are tendered to the responsible officers of the various Commonwealth and State Departments and Organisations who have kindly supplied material for the preparation of this Year Book.

IAN CASTLES  
Australian Statistician

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Canberra  
April 1986

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A number of government departments as well as private organisations and bodies have provided information in conjunction with the Australian Bureau of Statistics for inclusion in the Year Book.

The Bureau would like to thank the following institutions who either supplied basic material for the various articles or advised on their preparation:

### CHAPTER TWO:

PHYSICAL GEOGRAPHY AND  
CLIMATE OF AUSTRALIA  
Division of National Mapping  
Bureau of Mineral Resources, Geology  
and Geophysics  
Bureau of Meteorology

### CHAPTER THREE:

GENERAL GOVERNMENT  
Attorney-General's Department  
Australian Electoral Office  
Department of the Prime Minister and  
Cabinet  
Department of Administrative Services  
Department of Special Minister of State

### CHAPTER FOUR:

DEFENCE  
Department of Defence

### CHAPTER FIVE:

INTERNATIONAL RELATIONS  
Department of Foreign Affairs

### CHAPTER SEVEN:

PRICES  
Prices Surveillance Authority

### CHAPTER EIGHT:

THE LABOUR MARKET  
Department of Employment and  
Industrial Relations

### CHAPTER NINE:

SOCIAL SECURITY AND WELFARE  
Department of Social Security  
Department of Veterans' Affairs

### CHAPTER TEN:

HEALTH  
ACT Health Authority  
Department of Health  
Department of Veterans' Affairs  
Services and Investment Ltd (Cremation  
Society of Australia, ACT Ltd)  
National Heart Foundation of Australia

### CHAPTER ELEVEN:

LAW AND ORDER  
Australian Institute of Criminology  
Australian Law Reform Commission  
Attorney-General's Department

### CHAPTER TWELVE:

EDUCATION AND YOUTH  
AFFAIRS  
Department of Education  
Commonwealth Schools Commission  
Commonwealth Tertiary Education  
Commission  
Office of Youth Affairs

### CHAPTER THIRTEEN:

AGRICULTURAL INDUSTRIES  
Australian Dairy Corporation  
Australian Meat and Livestock  
Corporation  
Australian Wheat Board  
Australian Wool Corporation  
Bureau of Agricultural Economics—  
Forestry Economic Research Section,  
Canberra  
Bureau of Meteorology  
CSIRO-Institute of Animal and Food  
Sciences  
Department of Aviation  
Department of Primary Industry

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Institute of Biological Resources,  
Canberra  
Department of Primary Industry—  
Australian Fisheries Service, Canberra  
Department of Primary Industry—  
Forestry Branch, Canberra

**CHAPTER FIFTEEN:****WATER RESOURCES**

CSIRO—Water Research Committee,  
Canberra  
Department of Mines and Energy—Water  
Resources Division, Darwin  
Department of Resources and Energy—  
Water Development Division, Canberra  
Dumaresq-Barwon Border Rivers  
Commission, Brisbane  
Engineering and Water Supply  
Department, Adelaide  
Water Resources Commission of  
Queensland, Brisbane  
Public Works Department, Perth  
River Murray Commission, Canberra  
Rivers and Water Supply Commission,  
Hobart  
Rural Water Commission of Victoria,  
Armadale  
Water Authority of Western Australia,  
Perth  
Water Resources Commission of NSW,  
Sydney

**CHAPTER SIXTEEN:****MINERAL INDUSTRIES**

Australian Customs Service  
Australian Mineral Development  
Laboratories (AMDL)  
Commissioner for Taxation  
Department of Industry, Technology and  
Commerce  
Bureau of Mineral Resources, Geology  
and Geophysics

**CHAPTER SEVENTEEN:****MANUFACTURING AND  
INTERNAL TRADE**

Bureau of Industry Economics  
Commonwealth Scientific and Industrial  
Research Organization (CSIRO)  
National Standards Commission  
Standards Association of Australia

**CHAPTER EIGHTEEN:****ENERGY**

Commonwealth Scientific and Industrial  
Research Organization (CSIRO)  
Department of Resources and Energy  
Department of Trade

**CHAPTER NINETEEN:****HOUSING AND CONSTRUCTION**

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Australian Broadcasting Tribunal  
Australian Road Research Board  
Department of Aviation  
Department of Communications  
Department of Industry and Commerce  
Department of Transport  
National Association of Australian State  
Road Authorities  
Overseas Telecommunications Com-  
mission (Australia)  
Telecom Australia

**CHAPTER TWENTY-ONE:****PRIVATE FINANCE**

General Insurance Commission  
Life Insurance Commission  
Reserve Bank of Australia

**CHAPTER TWENTY-TWO:****PUBLIC FINANCE**

Australian Taxation Office  
Department of Primary Industry

**CHAPTER TWENTY-FOUR:****FOREIGN TRANSACTIONS**

Australian Customs Service, Department  
of Trade

**CHAPTER TWENTY-FIVE:****SCIENCE AND TECHNOLOGY**

Department of Science  
Department of Industry, Technology and  
Commerce  
Commonwealth Scientific and Industrial  
Research Organization (CSIRO)

**CHAPTER TWENTY-SIX:**

NATIONAL ESTATE, CULTURE,  
RECREATION AND TRAVEL  
Australia Council  
Department of Sport, Recreation and  
Tourism  
Department of Territories

**CHAPTER TWENTY-SEVEN:**

THE TERRITORIES  
ACT Schools Authority  
Department of Arts, Heritage and  
Environment  
Department of Sport, Recreation and  
Tourism  
Department of Territories

## GENERAL INFORMATION

### Symbols

The following *symbols*, where shown in columns of figures or elsewhere in tables mean:

- n.a. not available
- n.y.a. not yet available
- nil or rounded to zero
- .. not applicable
- n.p. not available for separate publication (but included in totals where applicable)
- p preliminary—figure or series subject to revision
- r figures or series revised since previous issue
- n.e.i. not elsewhere included
- n.e.c. not elsewhere classified
- n.e.s. not elsewhere specified
- break in continuity of series (where drawn across a column between two consecutive figures)
- \* subject to sampling variability too high for most practical purposes.  
m.—males; f.—females; p.—persons.

### Other forms of usage

The following *abbreviations* are used for the titles of the Australian States and Territories and Australia: N.S.W. (New South Wales), Vic. (Victoria), Qld (Queensland), W.A. (Western Australia), S.A. (South Australia), Tas. (Tasmania), N.T. (Northern Territory), A.C.T. (Australian Capital Territory), Aust. (Australia).

In general, the *statistics in this volume relate to the States and Territories of Australia*, i.e. they exclude particulars of the External Territories of Australia, which, however, are specifically dealt with in Chapter 27, The Territories of Australia.

*Yearly periods* shown as e.g. 1985 refer to the year ended 31 December 1985; those shown as e.g. 1984-85 refer to the year ended 30 June 1985. Other yearly periods are specifically indicated. The range of years shown in table headings, e.g. 1901 to 1984-85 indicates the period covered, but does not necessarily imply that each intervening year is included.

*Values* are shown in Australian dollars (\$) or \$A) or cents (c) unless another currency is specified.

*Catalogue numbers.* Throughout this book references are made to ABS publications. In each case the catalogue number is shown in brackets; this should be quoted when ordering these publications (*see below*).

Where figures have been rounded, *discrepancies may occur between sums of the component items and totals.*

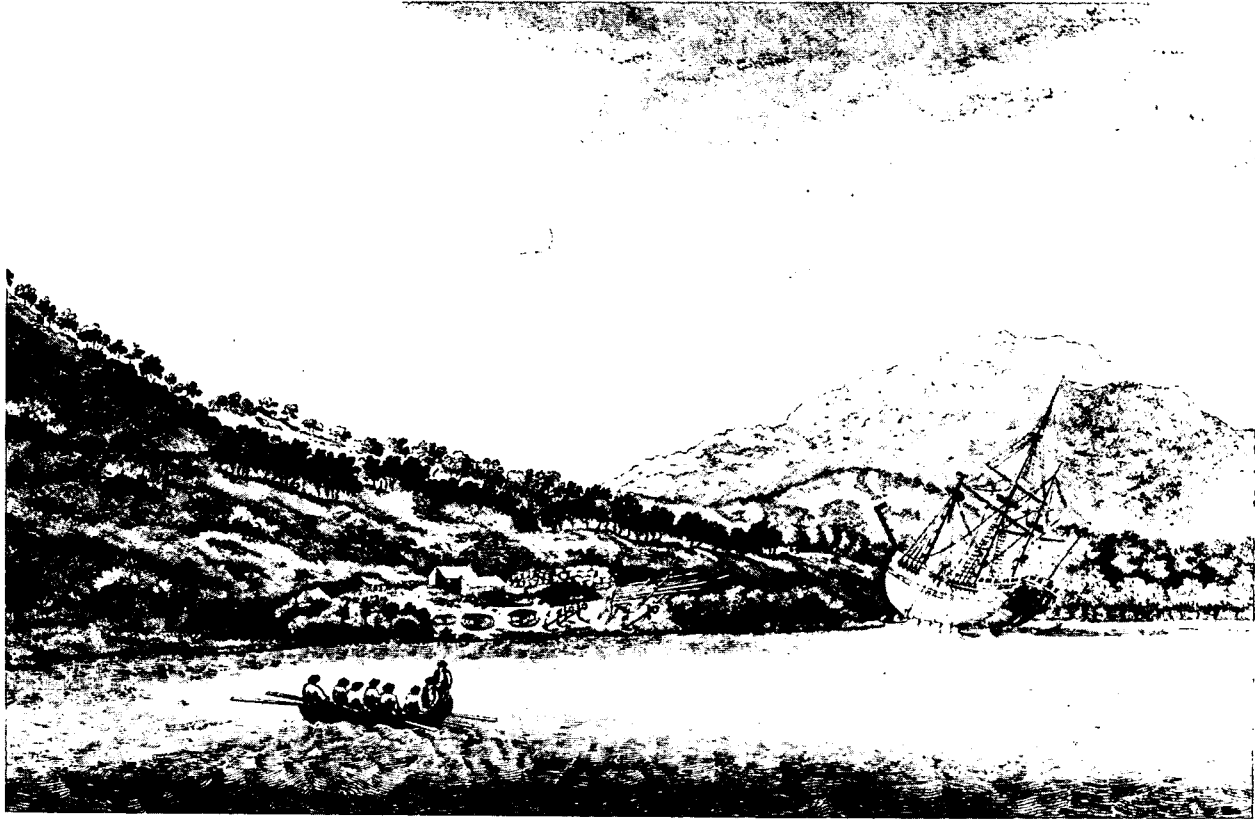
### Availability of ABS publications

Information regarding the availability of ABS publications can be obtained from the Information Services Section, Australian Bureau of Statistics, P.O. Box 10, Belconnen, A.C.T. 2616, Australia, phone (062) 52 6627, or from ABS offices in any capital city in Australia.

A complete list of ABS publications produced in Canberra and in each of the State Offices is contained in the *ABS Catalogue of Publications, Australia* (1101.0) which is available from any ABS office.

In some cases, the ABS can also make available information which is not published. This information may be made available in one or more of the following forms: microfiche, photocopy, data tape, computer printout or clerically extracted tabulation. Generally, a charge is made for providing unpublished information. Inquiries may be made by contacting Information Services in the nearest ABS office.





**GEZIGT VAN DE RIVIER ENDEAVOUR OP DE KUST  
VAN NIEUW—HOLLAND**

Reproduced from the line engraving by Ignaz Klauber (1754-1820). The engraving depicts Captain James Cook's ship, HMS *Endeavour*, beached for repairs off the Queensland coast in 1770.

*National Library of Australia*

## CHAPTER 1

### PRE-HISTORY TO FEDERATION

#### Early knowledge and discovery of Australia

##### Pre-history

Humans entered the Australian continent from the South-East Asian area during the last glaciation at least 40,000 years ago, at a time when sea levels were much lower than they are today. Even so, these first migrations would have entailed a sea voyage of some 60 kilometres, making it possibly the world's earliest sea-borne migration. Settlement was well established 25,000 to 30,000 years ago and by 20,000 years ago almost the entire continent was inhabited.

The original Australians lived as hunter-gatherers, using tools of wood, bone, shell and stone. Archaeological evidence indicates that a simple pan-continental toolmaking tradition existed characterised by stone ware tools; scrapers were used to fashion further tools out of wood. This tradition persisted until 5,000 to 6,000 years ago, at which time a range of more specialised small tools began to emerge. But, in Tasmania, isolated up until 12,000 years ago by the post-glacial rising seas, Aborigines still maintained the culture of the late Pleistocene period, until subject to the influence of European settlement of the island.

Anthropologists estimate the number of Aborigines in Australia at 1788 to vary from 250,000 to 300,000, they were divided into some 500 small groups and spoke a variety of languages and dialects. These groups or 'tribes' were further divided into 'bands' or clusters of family groups and formed the basic self-sufficient economic unit. Labour was divided between the sexes: the men hunted while the women foraged for roots and seeds and caught small animals which also formed a basic part of their subsistence. Local groups would congregate when food or water supplies were abundant or when ceremonial obligations demanded. Exchanges of goods at these ceremonial gatherings led to their wide dispersal. Religious and ceremonial activities relating to the land were a vital part of Aboriginal life and evidence suggests they had developed the use of ochre as a ritual painting material as early as 25,000 years ago.

The physical barriers of distance and aridity within Australia itself were cause, in part, of the cultural isolation and linguistic diversity of its people. European exploration and settlement was for most Aboriginal societies their first contact with an outside culture. The impact of this settlement in those areas where the colonists established themselves led rapidly to the disappearance of the traditional Aboriginal way of life.

##### Terra Australis

Although references to an Austral land are found in the works of writers in the early centuries after Christ, and evidence appears in maps, globes, and manuscripts from the Middle Ages onward, there is no definite evidence connecting this *Terra Australis* or southern land, as it was then known, with Australia. However, Cornelius Wytfliet's global map of 1597, see Year Book No. 69, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria.

##### Early discoveries of Australia

The early maps indicate that Portuguese mariners under Mendonca chartered part of the Australian east coast between 1521 and 1523. It has been suggested that the Arabs may have come to Australia even earlier, though there is no evidence to support this theory. For most purposes, the coastal exploration of Australia is taken as having begun with the Spaniards and the Dutch.

##### Discoveries by the Spanish

In 1606 the Spaniard, Quiros, on reaching the island of Espiritu Santo, the largest island of the New Hebrides group, thought he had discovered the great land of the south and therefore named the group *La Australia del Spiritu Santo*, in honor of Philip III of Spain, of the Austrian royal house.

After leaving the New Hebrides, Quiros sailed eastward, and therefore away from Australia, but Torres, his second-in-command, took a westerly course and passed through the strait that now bears his name. In all probability Torres sighted the Australian continent, although no mention of it is made in his records.

#### Discoveries by the Dutch

The map published by Cornelius Wytfliet in 1597 indicates roughly the eastern and western coast of Australia, as well as the Gulf of Carpentaria. However the Dutch first explored the coastline of Australia when, during 1606, the yacht *Duyfken* under the command of William Jansz having coasted along the southern shores of New Guinea, followed the west coast of Cape York Peninsula as far as Cape Keer-Weer (Turn Again). Subsequent visits were made by Hartog (1616), de Houtman (1619), Carstensz (1623), Thijssen (1627), Pelsaert (1629), Tasman and others (1642). By 1644 the Dutch had discovered and explored the Australian coast from Fowler's Bay in the South, to the tip of Cape York Peninsula, as well as the south of Tasmania.

More detailed information on discoveries by the Dutch can be found in Year Book No. 63.

#### Discoveries by the English

The English had made their first appearance on the Australian coast in 1688, when the north-westerly shores were visited by William Dampier in the trading vessel *Cygnets*. In 1699 he again visited Australia in command of H.M.S. *Roebuck*. On his return to England, he published an account in which a description was given of trees, flowers, birds, and reptiles he had observed, and of his encounters with the natives.

Up until the end of the seventeenth century, it was not certain if Tasmania and New Zealand were parts of Australia or whether they were separated from it, yet formed part of a great Antarctic Continent. Lieutenant (later Captain) James Cook's first voyage, though undertaken primarily for the purpose of observing the transit of Venus from Tahiti had also the objective of ascertaining whether the unexplored part of the southern hemisphere did in fact contain another continent. In command of H.M.S. *Endeavour*, and accompanied by botanist Sir Joseph Banks, naturalist Dr Daniel Solander, astronomer Charles Green, draughtsmen and servants, Cook, after observing the transit of Venus at Tahiti, turned towards New Zealand, sighting that land on 7 October 1769 in the neighbourhood of Poverty Bay.

On 20 April 1770, Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who saw it first. Coasting northwards, on 29 April 1770 he landed at Botany Bay. Cook resumed his voyage and sailed along the coast in a northerly direction for nearly 2,100 kilometres, before striking a coral reef in the vicinity of Trinity Bay where the *Endeavour* was seriously damaged. It was nearly two months before repairs were completed and Cook again set a course to the north through Torres Strait.

### The annexation of Australia

#### Possession taken of the eastern coast of Australia by Captain Cook

On 22 August 1770, Captain Cook took possession 'of the whole eastern coast, from latitude 38°S, to this place, latitude 10½°S, in right of His Majesty King George the Third', that is, over what now constitutes Victoria, the eastern parts of New South Wales and Queensland.

#### Annexation of the eastern part of the Australian continent and Tasmania

Formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian continent and Tasmania was taken on 26 January 1788, when Captain Phillip's commission, first issued to him on 12 October 1786 and amplified on 2 April 1787, was read to the people whom he had brought with him in the 'First Fleet'. The commission appointed Phillip 'Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south and of all the country inland, westward as far as the one hundred and thirty-fifth degree of east longitude, reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitude aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south'.

By the middle of 1829, the whole territory, now known as Australia, had been constituted a dependency of the United Kingdom.

## The exploration of Australia

### Early exploration

From 1788, when Governor Phillip established his colony on the shores of Port Jackson, expeditions began to explore the immediate area of settlement in search of good farming land. Among suitable locations discovered were those just above the head of the Parramatta River, where the settlement of Rose Hill (later Parramatta) was established in November 1788, and the alluvial flats of the Hawkesbury River, which were explored in 1789.

Other minor exploratory journeys in the 1790s and early 1800s included: John Wilson's investigation of various parts of the Southern Highlands of New South Wales, Lieutenant John Shortland's discovery of the Hunter River and the future site of Newcastle, and expeditions by Henry Hacking (1794), George Bass (1796), Francis Barrallier (1802) and George Caley (1804) in attempts to penetrate the mountain foothills west of the Nepean River.

After two decades of colonisation, settlement stretched along the east coast from the Hawkesbury River to the cedar forests of Illawarra yet reached barely 65 kilometres inland, where a seemingly impenetrable barrier was presented in the form of the Blue Mountains.

In 1813, Gregory Blaxland, Lieutenant William Lawson and William Charles Wentworth succeeded in finding a route through the mountain range, thereby allowing the later exploratory parties of George Willian Evans (1813 and 1815), John Oxley (1817 and 1818), Allan Cunningham (1823 and 1827), Hamilton Hume and William Hovell (1824) and others, to open the way for expansion from Port Phillip in the south, to the Darling Downs in the north.

### Exploring the eastern rivers and to the south

From 1828 to 1841, exploration of south-eastern Australia was concerned mainly with establishing the existence or not of a large river system emptying into the sea on the south coast.

Between December 1828 and February 1829, an expedition led by Charles Sturt followed the Macquarie River to its meeting with the Darling River. Sturt also explored part of the Castlereagh River. On his next expedition, in 1830, Sturt pieced together more of the network of waterways which make up the Murray-Darling system by following the Murrumbidgee River from Jugiong down to the junction with the Murray, which he then followed as far as Lake Alexandria and Encounter Bay on the southern coastline. Sturt completed his exploration of the Murray in 1838 by investigating and charting its upper reaches.

Meanwhile, Captain John MacArthur and others had discovered that merino sheep were naturally suited to the dry climate of inland Australia. The colony's wool industry flourished, and by 1831, 1,340,000 kilograms of fine wool was being exported annually. As a result of the wool boom, settlers became anxious to push further inland in the search for new pastures.

In the three expeditions between 1831 and 1836, Thomas Livingston Mitchell explored the Liverpool Plains and discovered the Macintyre River; discovered well-grassed country at the junction of the Darling and Bogan Rivers; explored the Lachlan River to its meeting with the Murrumbidgee River, the Murray with its meeting with the Darling River, and south and south-east of the Murray through the region called 'Australia Felix' to Discovery Bay on the Southern coast.

The push south continued and in 1838 Angus McMillan discovered a practicable route from Monaro to the southern coastline. In 1840, Paul Edmund de Strzelecki made a journey from the Murrumbidgee River, south to Melbourne, during which he discovered and named Mount Kosciusko.

### Exploring the south

In 1831, Captain Collet Barker landed at what was to become Port Adelaide. Later cattle-droving journeys undertaken by Joseph Hawdon, Charles Bonney, Charles Sturt and E. J. Eyre established links between the settlement of Adelaide and other settlements in the east of the state.

In August 1844, Charles Sturt led a sixteen man expedition from Adelaide into the interior with instructions to investigate a theory that an inland sea existed. After much hardship and near disaster during a period of exceptional heat in the region, Sturt found the channels of Cooper's Creek which formed part of the inland river system of Queensland. However, with the waters drying up rapidly in November 1845, heat and his health deteriorating, Sturt was forced to retreat, mistakenly declaring the land to be worthless.

### Exploring north-eastern Australia

In 1844 Ludwig Leichhardt left Jimbour Station on the Darling Downs, to lead an expedition on an epic 141 month, 4,800 kilometre journey north and north-west to Port Essington, thereby winning a reputation for opening up large tracts of rich grazing land. In 1848 however, while on another expedition he and his party disappeared without trace when attempting to cross the continent westwards to Perth. Paradoxically much valuable incidental exploration was carried out when search parties attempted to find them.

Meanwhile, Thomas Mitchell's fourth expedition in 1846 had failed in its objective to find a river which flowed to the northern coast, but did lead to the opening up of good pastoral country in the Maranoa and Barcoo Rivers regions.

In 1848, E. B. Kennedy was speared to death by local Aboriginals while exploring the interior of Cape York Peninsula from Rockingham Bay to the Cape.

In the mid-to late 1850s, Angus C. Gregory led two expeditions: one, in 1855 across northern Australia in a west-east direction from the mouth of the Victoria River to the east coast at Port Curtis; and the other, in 1858, from the Barcoo River south the Adelaide.

Exploration of what was by then the new colony of Queensland was continued through the 1860s and 1870s by George Dalrymple, Ernest Henry, the Macdonald brothers, William Hann, James Venture Mulligan, R. L. Jack and others, these led to the founding of such towns as Bowen, Rockhampton and Mackay, and the opening up of much valuable farming land.

### Across the continent south to north

In the late 1850s and early 1860s, most exploratory interest was concentrated on Central Australia, especially after John McDougall Stuart raised a Union Jack on what he considered to be the geographic centre of the continent, Central Mount Stuart, in April 1860. The South Australian Government had previously offered a large reward to the first explorer to cross Australia from south to north.

In August 1860, Robert O'Hara Burke and W. J. Wills set out from Melbourne with a large party to take up the challenge. On 11 February 1861, four expedition members (Burke, Wills, John King and Charles Gray) reached a mangrove swamp on what appeared to be the coast at the Gulf of Carpentaria (though they could not see the sea). After a succession of sorry incidents, however, Burke, Wills and Gray all died of exposure and starvation while on their return journey.

As in the case of Leichhardt, search parties sent out after Burke and Wills also discovered much valuable land in their own right; John McKinlay led an expedition from Adelaide to the north-east; William Landsborough from the Gulf of Carpentaria southward; and Frederick Walker from Rockhampton to the west.

Meanwhile, John McDougall Stuart had set out from Adelaide on his own expedition across Australia and, in July 1862, reached the sea at Van Diemen Gulf.

### Exploring the west

As early as 1697, Willem de Vlamingh of the Dutch ship *Geelvinck*, carried out limited inland exploration on the west coast of Australia in the vicinity of the Swan River. However, the first major inland exploration in the colony of Western Australia took place 130 years later when, in 1827, Edmund Lockyer explored the watershed of the Kalgan River to within about 60 kilometres of its mouth.

In the 1830s, exploration and settlement was directed mainly to the south of the city of Perth (founded in 1829). Among the explorers during this decade were: Ensign Robert Dale, who found the rich agricultural land of the Avon Valley (1830); Lieutenant H. W. Bunbury, who open the way to rich pastoral flats in the south-west (1836); and Captain George Grey, who discovered the rich hinterland that now serves Geraldton (1839).

In 1848, J. S. Roe, who had also conducted several exploratory journeys in the 1830s, discovered good grazing country while on a 2,900 kilometre York-Pallinup River, Russell Range-Bunbury-Perth trek.

During the 1850s and 1860s the south-west was extensively occupied as far south as Albany and Kojonup, while to the north the Greenough district rapidly developed into the principal wheat-producing region of the State.

Due largely to the efforts of Grey in the 1830s, the Gregory brothers in the 1840s, 1850s and 1860s, and the Forrest brothers in the 1860s and 1870s, pastoralists were able to gradually push further north and occupy the Murchison, Gascoyne and De Grey districts. By the 1880s, again due largely to exploration by the Forrest brothers, the Kimberley region was also settled.

### Exploring the hinterland

In 1875, Ernest Giles set out from Beltana, South Australia, and made a 4,000 kilometre journey to Perth. Two years earlier two other parties, led by Peter Egerton Warburton and W. C. Gosse, had explored west from the MacDonnell Ranges to the Oakover River, and from Alice Springs to Perth respectively.

Exploration of the hinterland was continued by W. P. Goddard (1890), J. H. Rowe (1895), A. W. Canning and others into the early twentieth century.

### Exploring Tasmania

In 1793 Lieutenant John Hayes, commander of the *Duke of Clarence* expedition sailed up the Derwent River to the foot of Mt Direction from where he proceeded by boat up to the present site of New Norfolk. He became the first explorer to journey more than a few kilometres inland from the coast of Van Diemen's Land (by which name Tasmania was known until 1856). Then, as always, the island's rugged topography hindered any extensive exploration, and it was not until 1807 that Lieutenant Thomas Laycock crossed the island from Port Dalrymple to Hobart.

Much early exploration was carried out either, with the encouragement of Lieutenant-Governor William Sorell (including expeditions aimed primarily at discovering the nature of the west coast and determining its suitability for a future penal settlement), or under the auspices of the Van Diemen's Land Company which fostered efforts to find land suitable for agricultural settlement.

Some of the most noteworthy of Tasmania's early explorers were official surveyors, including John Oxley, G. W. Evans and Thomas Scott who, between 1820 and 1837, examined parts of the east, north-west and west coasts and, no doubt, influenced decisions to establish the infamous penal settlements at Macquarie Harbour (in 1822) and Port Arthur (in 1830).

Between 1820 and 1840 a considerable amount of incidental exploration resulted both from expeditions to round the remaining Tasmanian Aborigines following the declaration of martial law against them in 1828; and from the personal encouragement by Lieutenant-Governor Sir John Franklin of scientific expeditions to Tasmania in the late 1830s and early 1840s.

During 1840 and 1850, licensed surveyor N. L. Kentish was responsible for opening up the rich pastoral areas between the north-west coast and the high mountains, while Assistant-Surveyor James Scott explored much of the north-east.

The years 1860 and 1870 were marked by a number of exploratory journeys in search of minerals, including those of Charles Gould (1862), who found traces of silver, lead and gold in the Franklin and Gordon Valleys; James Smith (1871), who discovered tin at Mt. Bischoff, destined to become the richest mine of its kind in the world; and C. P. Sprent (1876-77), who found gold, copper, osmiridium and platinum while prospecting between the Arthur and Pieman Rivers.

## The establishment of the Commonwealth of Australia

### Federation

On 1 January 1901, the colonies, with the exception of New Zealand, were federated under the name of the 'Commonwealth of Australia', the designation of 'Colonies'—except in the case of the Northern Territory, to which the designation 'Territory' applied—being at the same time changed to that of 'States'.

### Transfer of the Northern Territory to the Commonwealth

On 7 December 1907, the Commonwealth and the State of South Australia entered into an agreement for the transfer of the Northern Territory to the Commonwealth, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under the *Northern Territory Surrender Act, 1907* and by the Commonwealth Parliament under the *Northern Territory Acceptance Act 1910*. The Territory was formally transferred to the Commonwealth on 1 January 1911, and became the Northern Territory of Australia.

### Transfer of the Australian Capital Territory to the Commonwealth

On 18 October 1909, the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 2,359 square kilometres as the Seat of Government of the Commonwealth. In December 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5 December 1910 a proclamation was issued vesting the territory in the Commonwealth on and from 1 January 1911.

By the *Jervis Bay Territory Acceptance Act 1915*, an area of 73 square kilometres at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was also accepted by the Commonwealth and was transferred as from 4 September 1915.

### Present composition of Australia

In 1973, the total area of Australia and of the individual States and Territories was determined by the Division of National Mapping as 7,682,300 square kilometres. Some historical dates and the present areas of the several States and Territories and of Australia are shown in the following table.

AUSTRALIA: COMPONENT STATES AND TERRITORIES

State or Territory	Year of annexation	Year of first permanent settlement	Year of formation into separate Colony or Territory	Year in which responsible government was granted	Present area in km <sup>2</sup>
New South Wales	1770	1788	1786	1855	801,600
Victoria	1770	1834	1851	1855	227,600
Queensland	1770	1824	1859	(a) 1859	1,727,200
South Australia	1788	1836	1834	1856	984,000
Western Australia	1829	1829	1829	1890	2,525,000
Tasmania	1788	1803	1825	1855	67,800
Northern Territory	..	..	(b) 1863	..	1,346,200
Australian Capital Territory	..	..	(c) 1911	..	2,400
<b>Australia</b>	..	..	..	(d)	<b>7,682,300</b>

(a) As part of New South Wales in 1855; as a separate colony in 1859. (b) Previously part of New South Wales; brought under the jurisdiction of South Australia in 1863; transferred to the Commonwealth in 1911. (c) Previously part of New South Wales. (d) Constituted as from 1 January 1901.

## The external Territories of Australia

### Norfolk Island

In 1856, Norfolk Island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1897, it was made a dependency under the Governor of that colony and finally, by the passage of the *Norfolk Island Act 1913*, it was accepted as a Territory of the Commonwealth of Australia. The island is situated in latitude 29° 02' S., longitude 167° 57' E., and comprises an area approximately 36 square kilometres. It served as a penal station from 1788–1813 and from 1825–1855.

### Australian Antarctic Territory

An Imperial Order in Council of 7 February 1933 placed under Australian authority 'all the islands and territories other than Adelie Land which are situated south of the 60° S. latitude and lying between the 160° E. longitude and the 45° E. longitude'.

The Order came into force with a proclamation issued by the Governor-General on 24 August 1936, after the passing of the *Australian Antarctic Territory Acceptance Act 1933* by the Commonwealth Parliament. The boundaries of Adelie Land were definitely fixed by a French Decree of 1 April 1938 as latitude 60° S., longitude 136° E., and longitude 142° E.

### Heard and McDonald Islands

Heard Island and the McDonald Islands, approximately 4,100 kilometres south-west of Fremantle, were transferred from United Kingdom to Australian control as from 26 December 1947. Heard Island is approximately 43 kilometres long and 20 kilometres wide, while the McDonald Islands, about 43 kilometres to the west of Heard Island, are small, rocky and precipitous.

### Cocos (Keeling) Islands

The *Cocos (Keeling) Islands Act 1955* provided for the acceptance of the Cocos Islands as a Territory under the authority of the Commonwealth of Australia and was parallel to an Act of the United Kingdom Parliament transferring authority over the islands to the

Commonwealth. On 6 April 1984 the Cocos Malay community, in an Act of Self Determination which took the form of a referendum observed by the United Nations, chose to integrate with Australia. Day-to-day affairs in the Territory are managed by an Administrator appointed by the Governor-General and responsible to the Minister for Territories. The 27 coral islands of the territory have an area of about 14 square kilometres, and are situated in the Indian Ocean in latitude 12° 05' S. and longitude 96° 53' E.

#### **Christmas Island**

The *Christmas Island Act 1958* provided for the acceptance of Christmas Island as a Territory under the authority of the Commonwealth of Australia. Complementary legislation having been passed by the Parliament of the United Kingdom, the island was transferred to the Australian administration on 1 October 1958. Day-to-day affairs in the Territory are managed by an Administrator under delegation from the Minister for Territories. The area of the island is about 135 square kilometres and it is situated in the Indian Ocean in latitude 10° 25' S. and longitude 105° 40' E.

#### **Coral Sea Islands**

The Coral Sea Islands were declared to be a Territory of the Commonwealth of Australia by the *Coral Sea Islands Act 1969*. The scattered reefs and islands, offer little more than sandbanks, spread over a sea area of about 1 million square kilometres with only a few square kilometres of actual land area, between the Great Barrier Reef, latitude 12° S. and longitude 157° 10' E. The Minister for Territories is responsible for matters affecting the Territory.

#### **Ashmore and Cartier Islands**

An Imperial Order in Council of 23 July 1931 placed the islands under the authority of the Commonwealth of Australia. They were accepted by the Commonwealth through the *Ashmore and Cartier Acceptance Act 1933*, under the name of the Territory of Ashmore and Cartier Islands. The Act authorised the Governor of Western Australia to make ordinances in the Territory. An amendment to the Act in July 1938 annexed the islands to the Northern Territory, whose laws, wherever applicable, thereupon applied until 1978, when the islands reverted to federal jurisdiction. Cartier Island is situated in latitude 12° 32' S., longitude 123° 33' E. and has an area of approximately 9 square kilometres. Ashmore Islands (East, Middle and West) lie approximately 48 kilometres north-west of Cartier and have a total area of about 150 square kilometres.

More detailed information on Australia's external Territories can be found in Chapter 27, *The Territories of Australia*.

### **The Constitution of the Commonwealth of Australia**

Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the federal movement in Australia, was embodied in this chapter in earlier issues of the Year Book.

#### **Commonwealth Constitution Act**

The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely: 'An Act to constitute the Commonwealth of Australia', as amended by the *Constitution Alteration (Senate Elections) 1906*, the *Constitution Alteration (State Debts) 1909*, the *Constitution Alteration (State Debts) 1928*, the *Constitution Alteration (Social Services) 1946*, the *Constitution Alteration (Aboriginals) 1967*, the *Constitution Alteration (Senate Casual Vacancies) 1977*, the *Constitution Alteration (Retirement of Judges) 1977*, and the *Constitution Alteration (Referendums) 1977*, follows. The text contains all the alterations of the Constitution made up to and including 1 December 1977. No further alterations were made to the end of 1985.



# THE CONSTITUTION

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## (63 & 64 VICTORIA, CHAPTER 12)

*An Act to Constitute the Commonwealth of Australia. (9th July, 1900.)*

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established:

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian Colonies and possessions of the Queen:

Be it therefore enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.
2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.
3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation appoint a Governor-General for the Commonwealth.
4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.

5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State; and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.

6. "The Commonwealth" shall mean the Commonwealth of Australia as established under this Act.

"The States" shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States; and each of such parts of the Commonwealth shall be called "a State."

"Original States" shall mean such States as are parts of the Commonwealth at its establishment.

7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act, 1895, shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows:—

## THE CONSTITUTION

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This Constitution is divided as follows:—

Chapter	I.—The Parliament:
Part	I.—General:
Part	II.—The Senate:
Part	III.—The House of Representatives:
Part	IV.—Both Houses of the Parliament:
Part	V.—Powers of the Parliament:
Chapter	II.—The Executive Government:
Chapter	III.—The Judicature:
Chapter	IV.—Finance and Trade:
Chapter	V.—The States:
Chapter	VI.—New States:
Chapter	VII.—Miscellaneous:
Chapter	VIII.—Alteration of the Constitution:
The Schedule.	

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## CHAPTER I

### THE PARLIAMENT

#### PART I—GENERAL

1. The Legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives, and which is herein-after called "The Parliament," or "The Parliament of the Commonwealth."

2. A Governor-General appointed by the Queen shall be Her Majesty's representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen's pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

## PART II—THE SENATE

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State. The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws for determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the senators of the first class shall become vacant at the expiration of three years, and the places of those of the second class at the expiration of six years, from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made within one year before the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of July following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of July preceding the day of his election.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen, sitting and voting together, or, if there is only one House of that Parliament, that House, shall choose a person to hold the place until the expiration of the term. But if the Parliament of the State is not in session when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days from the beginning of the next session of the Parliament of the State or the expiration of the term, whichever first happens.

Where a vacancy has at any time occurred in the place of a senator chosen by the people of a State and, at the time when he was so chosen, he was publicly recognised by a particular political party as being an endorsed candidate of that party and publicly represented himself to be such a candidate, a person chosen or appointed under this section in consequence of that vacancy, or in consequence of that vacancy and a subsequent vacancy or vacancies, shall, unless there is no member of that party available to be chosen or appointed, be a member of that party.

Where—

- (a) in accordance with the last preceding paragraph, a member of a particular political party is chosen or appointed to hold the place of a senator whose place had become vacant; and
- (b) before taking his seat he ceases to be a member of that party (otherwise than by reason of the party having ceased to exist),

he shall be deemed not to have been so chosen or appointed and the vacancy shall be again notified in accordance with section twenty-one of this Constitution.

The name of any senator chosen or appointed under this section shall be certified by the Governor of the State to the Governor-General.

If the place of a senator chosen by the people of a State at the election of senators last held before the commencement of the *Constitution Alteration (Senate Casual Vacancies) 1977* became vacant before that commencement and, at that commencement, no person chosen by the House or Houses of Parliament of the State, or appointed by the Governor of the State, in consequence of that vacancy, or in consequence of that vacancy and a subsequent vacancy or vacancies, held office, this section applies as if the place of the senator chosen by the people of the State had become vacant after that commencement.

A senator holding office at the commencement of the *Constitution Alteration (Senate Casual Vacancies) 1977*, being a senator appointed by the Governor of a State in consequence of a vacancy that had at any time occurred in the place of a senator chosen by the people of the State, shall be deemed to have been appointed to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State that commenced or commences after he was appointed and further action under this section shall be taken as if the vacancy in the place of the senator chosen by the people of the State had occurred after that commencement.

Subject to the next succeeding paragraph, a senator holding office at the commencement of the *Constitution Alteration (Senate Casual Vacancies) 1977* who was chosen by the House or Houses or Parliament of a State in consequence of a vacancy that had at any time occurred in the place of a senator chosen by the people of the State shall be deemed to have been chosen to hold office until the expiration of the term of service of the senator elected by the people of the State.

If, at or before the commencement of the *Constitution Alteration (Senate Casual Vacancies) 1977*, a law to alter the Constitution entitled "*Constitution Alteration (Simultaneous Elections) 1977*" came into operation, a senator holding office at the commencement of that law who was chosen by the House or Houses of Parliament of a State in consequence of a vacancy that had at any time occurred in the place of a senator chosen by the people of the State shall be deemed to have been chosen to hold office—

- (a) if the senator elected by the people of the State had a term of service expiring on the thirtieth day of June, One thousand nine hundred and seventy-eight—until the

expiration or dissolution of the first House of Representatives to expire or be dissolved after that law came into operation; or

- (b) if the senator elected by the people of the State had a term of service expiring on the thirtieth day of June, One thousand nine hundred and eighty-one—until the expiration or dissolution of the second House of Representatives to expire or be dissolved after that law come into operation or, if there is an earlier dissolution of the Senate, until that dissolution.

**16.** The qualifications of a senator shall be the same as those of a member of the House of Representatives.

**17.** The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

**18.** Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

**19.** A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

**20.** The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

**21.** Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

**22.** Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

**23.** Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

### PART III—THE HOUSE OF REPRESENTATIVES

**24.** The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:—

- (i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators;
- (ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section, five members at least shall be chosen in each Original State.

**25.** For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows:—

New South Wales . . . . .	twenty-three;
Victoria . . . . .	twenty;
Queensland . . . . .	eight;
South Australia . . . . .	six;
Tasmania . . . . .	five;

Provided that if Western Australia is an original State, the numbers shall be as follows:—

New South Wales . . . . .	twenty-six;
Victoria . . . . .	twenty-three;
Queensland . . . . .	nine;
South Australia . . . . .	seven;
Western Australia . . . . .	five;
Tasmania . . . . .	five.

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provisions, each State shall be one electorate.

30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows:—

- (i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen:
- (ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

37. A member may be writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

#### PART IV—BOTH HOUSES OF THE PARLIAMENT

41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorised by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

- (i) Is under any acknowledgment of allegiance, obedience, or adherence, to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power: or
- (ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer: or
- (iii) Is an undischarged bankrupt or insolvent: or
- (iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth: or
- (v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons:

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section (iv) does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half pay, or a pension, by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

**45. If a senator or member of the House of Representatives—**

- (i) Becomes subject to any of the disabilities mentioned in the last preceding section: or
- (ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors: or
- (iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State:

his place shall thereupon become vacant.

**46.** Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

**47.** Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House, shall be determined by the House in which the question arises.

**48.** Until the Parliament otherwise provides, each senator and each of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.

**49.** The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

**50. Each House of the Parliament may make rules and orders with respect to—**

- (i) The mode in which its powers, privileges, and immunities may be exercised and upheld:
- (ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

**PART V—POWERS OF THE PARLIAMENT**

**51.** The Parliament shall, subject to this constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to:

- (i) Trade and commerce with other countries, and among the States:
- (ii) Taxation; but so as not to discriminate between States or parts of States:
- (iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth:
- (iv) Borrowing money on the public credit of the Commonwealth:
- (v) Postal, telegraphic, telephonic, and other like services:
- (vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth:
- (vii) Lighthouses, lightships, beacons and buoys:
- (viii) Astronomical and meteorological observations:
- (ix) Quarantine:
- (x) Fisheries in Australian waters beyond territorial limits:
- (xi) Census and statistics:
- (xii) Currency, coinage, and legal tender:
- (xiii) Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money:
- (xiv) Insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned:
- (xv) Weights and measures:



- (xvi) Bills of exchange and promissory notes:
- (xvii) Bankruptcy and insolvency:
- (xviii) Copyrights, patents of inventions and designs, and trade marks:
- (xix) Naturalization and aliens:
- (xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth:
- (xxi) Marriage:
- (xxii) Divorce and matrimonial causes; and in relation thereto, parental rights, and the custody and guardianship of infants:
- (xxiii) Invalid and old-age pensions:
- (xxiiiA) The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances:
- (xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States:
- (xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States:
- (xxvi) The people of any race, for whom it is deemed necessary to make special laws:
- (xxvii) Immigration and emigration:
- (xxviii) The influx of criminals:
- (xxix) External affairs:
- (xxx) The relations of the Commonwealth with the islands of the Pacific:
- (xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws:
- (xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth:
- (xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State:
- (xxxiv) Railway construction and extension in any State with the consent of that State:
- (xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State:
- (xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides:
- (xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law:
- (xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia:
- (xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any Department or officer of the Commonwealth.

**52.** The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth with respect to—

- (i) The seat of government of the Commonwealth, and all places acquired by the Commonwealth for public purposes:
- (ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth:
- (iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

**53.** Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed law so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

55. Laws imposing taxation shall deal only with the imposition of taxation, and any provision therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and the House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent, he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

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## CHAPTER II

### THE EXECUTIVE GOVERNMENT

61. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.

66. There shall be payable to the Queen, out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which, until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth:—

- Posts, telegraphs, and telephones:
- Naval and military defence:
- Lighthouses, lightships, beacons and buoys:
- Quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

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### CHAPTER III

#### THE JUDICATURE

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.

72. The Justices of the High Court and of the other courts created by the Parliament—

- (i) Shall be appointed by the Governor-General in Council:
- (ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity:
- (iii) Shall receive such remuneration as the Parliament may fix; but the remuneration shall not be diminished during continuance in office.

The appointment of a Justice of the High Court shall be for a term expiring upon his attaining the age of seventy years, and a person shall not be appointed as a Justice of the High Court if he has attained that age.

The appointment of a Justice of a court created by the Parliament shall be for a term expiring upon his attaining the age that is, at the time of his appointment, the maximum age for Justices of that court and a person shall not be appointed as a Justice of such a court if he has attained the age that is for the time being the maximum age for Justices of that court.

Subject to this section, the maximum age for Justices of any court created by the Parliament is seventy years.

The Parliament may make a law fixing an age that is less than seventy years as the maximum age for Justices of a court created by the Parliament and may at any time repeal or amend such a law, but any such repeal or amendment does not affect the term of office of a Justice under an appointment made before the repeal or amendment.

A Justice of the High Court or of a court created by the Parliament may resign his office by writing under his hand delivered to the Governor-General.

Nothing in the provisions added to this section by the *Constitution Alteration (Retirement of Judges) 1977* affects the continuance of a person in office as a Justice of a court under an appointment made before the commencement of those provisions.

A reference in this section to the appointment of a Justice of the High Court or of a court created by the Parliament shall be read as including a reference to the appointment of a person who holds office as a Justice of the High Court or of a court created by the Parliament to another office of Justice of the same court having a different status or designation.

73. The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments,

decrees, orders, and sentences—

- (i) Of any Justice or Justices exercising the original jurisdiction of the High Court:
- (ii) Of any other federal court, or court exercising federal jurisdiction; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council:
- (iii) Of the Inter-State Commission, but as to questions of law only:

and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

**74.** No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits inter se of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits inter se of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

**75.** In all matters—

- (i) Arising under any treaty:
- (ii) Affecting consuls or other representatives of other countries:
- (iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party:
- (iv) Between States, or between residents of different States, or between a State and a resident of another State:
- (v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth:

the High Court shall have original jurisdiction.

**76.** The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

- (i) Arising under this Constitution, or involving its interpretation:
- (ii) Arising under any laws made by the Parliament:
- (iii) Of Admiralty and maritime jurisdiction:
- (iv) Relating to the same subject-matter claimed under the laws of different States.

**77.** With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

- (i) Defining the jurisdiction of any federal court other than the High Court;
- (ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States:
- (iii) Investing any court of a State with federal jurisdiction.

**78.** The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

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## CHAPTER IV

### FINANCE AND TRADE

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from that office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof, to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

85. When any department of the public service of a State is transferred to the Commonwealth—

- (i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth; but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary:

- (ii) The Commonwealth may acquire any property of the state, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the state in force at the establishment of the Commonwealth:
- (iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section; if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament:
- (iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

**86.** On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

**87.** During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

**88.** Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

**89.** Until the imposition of uniform duties of customs—

- (i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
- (ii) The Commonwealth shall debit to each State—
  - (a) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth;
  - (b) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth.
- (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

**90.** On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

**91.** Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid or bounty on the production or export of goods.

**92.** On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years

after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

**93.** During the first five years after the imposition of uniform duties of customs, and thereafter until the Parliament otherwise provides—

- (i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State;
- (ii) Subject to the last subsection, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

**94.** After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair for the monthly payment to the several States of all surplus revenue of the Commonwealth.

**95.** Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an Original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported beyond the limits of the Commonwealth; and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three fifths, two-fifths, and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

**96.** During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

**97.** Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.

**98.** The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

**99.** The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

**100.** The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

**101.** There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.

**102.** The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under



a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

**103.** The members of the Inter-State Commission—

- (i) Shall be appointed by the Governor-General in Council;
- (ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity;
- (iii) Shall receive such remuneration as the Parliament may fix; but such remuneration shall not be diminished during their continuance in office.

**104.** Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

**105.** The Parliament may take over from the States their public debts, or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof; and the States shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

**105A.—(1)** The Commonwealth may make agreements with the States with respect to the public debts of the States, including—

- (a) the taking over of such debts by the Commonwealth;
- (b) the management of such debts;
- (c) the payment of interest and the provision and management of sinking funds in respect of such debts;
- (d) the consolidation, renewal, conversion, and redemption of such debts;
- (e) the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth; and
- (f) the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.

(2) The Parliament may make laws for validating any such agreement made before the commencement of this section.

(3) The Parliament may make laws for the carrying out by the parties thereto of any such agreement.

(4) Any such agreement may be varied or rescinded by the parties thereto.

(5) Every such agreement and any such variation thereof shall be binding upon the Commonwealth and the States parties thereto notwithstanding anything contained in this Constitution or the Constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.

(6) The powers conferred by this section shall not be construed as being limited in any way by the provision of section one hundred and five of this Constitution.

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## CHAPTER V

### THE STATES

**106.** The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or

establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

**107.** Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

**108.** Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

**109.** When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

**110.** The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

**111.** The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

**112.** After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the new produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

**113.** All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale, or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

**114.** A state shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

**115.** A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

**116.** The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

**117.** A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

**118.** Full faith and credit shall be given, throughout the Commonwealth to the laws, the public Acts and records, and the judicial proceedings of every State.

**119.** The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

**120.** Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

## CHAPTER VI

## NEW STATES

**121.** The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

**122.** The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

**123.** The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

**124.** A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

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 CHAPTER VII

## MISCELLANEOUS

**125.** The seat of Government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the seat of Government.

**126.** The Queen may authorise the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

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 CHAPTER VIII

## ALTERATION OF THE CONSTITUTION

**128.** This Constitution shall not be altered except in the following manner:—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State and Territory to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it, or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State and Territory qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

In this section, "Territory" means any territory referred to in section one hundred and twenty-two of this Constitution in respect of which there is in force a law allowing its representation in the House of Representatives.

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## SCHEDULE

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### OATH

I, *A.B.*, do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. **SO HELP ME GOD!**

### AFFIRMATION

I, *A.B.*, do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

(NOTE.—*The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.*)

## CHAPTER 2

# PHYSICAL GEOGRAPHY AND CLIMATE OF AUSTRALIA

### General description of Australia

This chapter is mainly concerned with the climate of Australia, although some geographic comparisons and a summary of landform features influencing climate have been included together with a summary of atmospheric climate controls.

#### Position and area

*Position.* Australia comprises a land area of 7,682,300 square kilometres. The land lies between latitudes 10°41'S. (Cape York) and 43°39'S. (South Cape, Tasmania) and between longitudes 113°09'E. (Steep Point) and 153°39'E. (Cape Byron). The most southerly point on the mainland is South Point (Wilson's Promontory) 39°08'S. The latitudinal distance between Cape York and South Point, Wilson's Promontory (South East Cape, Tasmania) is about 3,180 kilometres (3,680 kilometres) respectively and the longitudinal distance between Steep Point and Cape Byron is about 4,000 kilometres.

*Area of Australia compared with areas of other countries.* The area of Australia is almost as great as that of the United States of America (excluding Alaska), about 50 per cent greater than Europe (excluding U.S.S.R.) and 32 times greater than the United Kingdom. The following table shows the area of Australia in relation to areas of other continents and selected countries.

**AREAS OF CONTINENTS AND SELECTED COUNTRIES**  
(<sup>'000</sup> square kilometres)

Country	Area	Country	Area
<b>Continental divisions—</b>			
Europe (a) . . . . .	4,936	Canada . . . . .	9,976
Asia (a) . . . . .	27,532	China . . . . .	9,590
U.S.S.R. (Europe and Asia) . . . . .	22,402	Germany, Federal Republic of . . . . .	248
Africa . . . . .	30,319	India . . . . .	3,288
North and Central America and West Indies . . . . .	24,247	Indonesia . . . . .	1,919
South America . . . . .	17,834	Japan . . . . .	372
Oceania . . . . .	8,504	Papua New Guinea . . . . .	462
		New Zealand . . . . .	269
<b>Country—</b>		United Kingdom . . . . .	244
Australia . . . . .	7,682	United States of America (b) . . . . .	9,363
Brazil . . . . .	8,512	<b>Total, land mass excluding Arctic and Antarctic continents. . . . .</b>	<b>135,771</b>

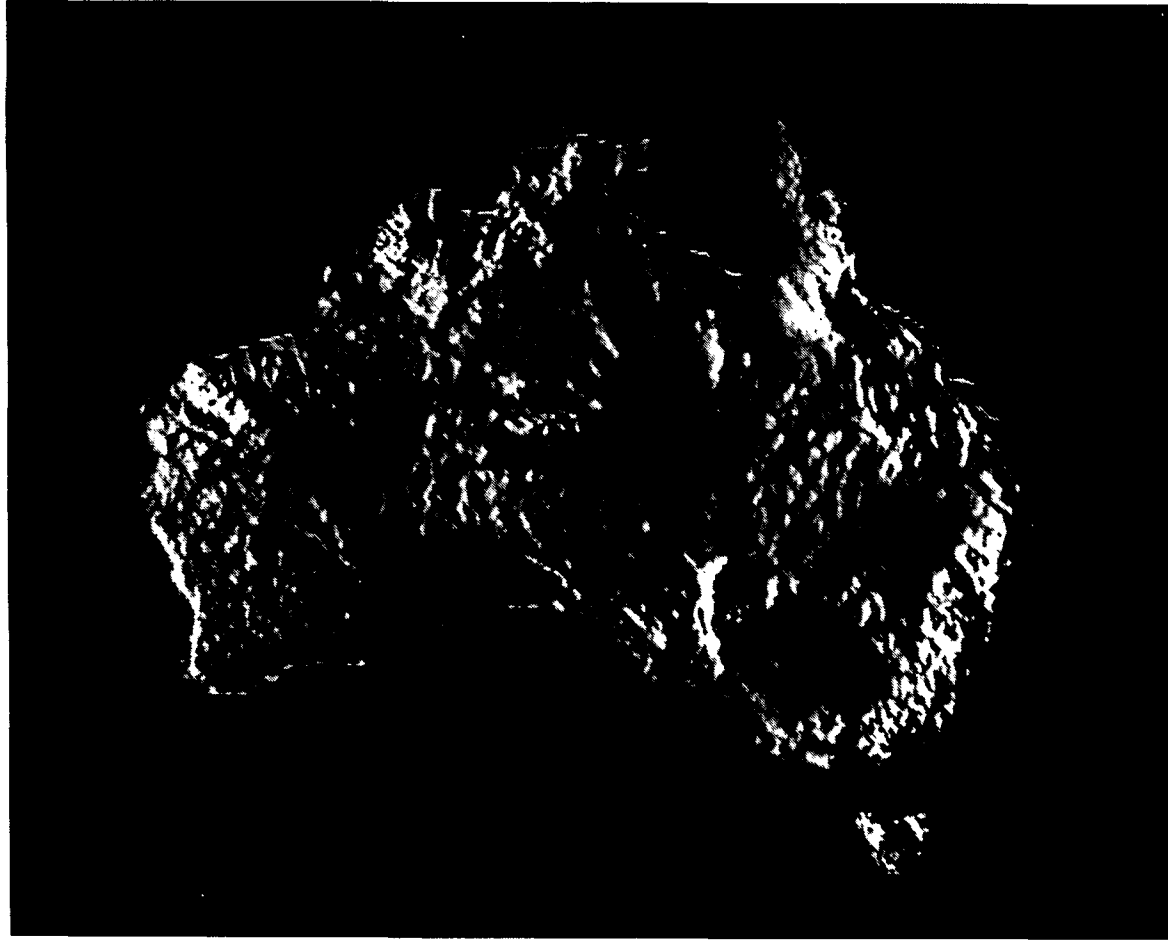
(a) Excludes U.S.S.R., shown below. (b) Includes Hawaii and Alaska.

#### Landforms and their history

Australia is the lowest, flattest, and (apart from Antarctica) the driest of the continents. Unlike most of Europe and North America where much of the landscape dates back 20,000 years, the age of Australian landforms is generally measured in many millions of years. These facts give it a very distinctive physical geography.

The average altitude of the surface of the Australian land mass is only 300 metres. Approximately 87 per cent of that land mass is less than 500 metres and 99.5 per cent is less than 1,000 metres. The highest point is Mount Kosciusko (2,230 metres) and the lowest point is Lake Eyre (−15 metres).

Australia has three major landform features: the western plateau, the central lowlands and the eastern highlands. The western half of the continent consists of a great plateau of altitude 300 to 600 metres. The central lowlands include the channel country of southwest Queensland (drainage to Lake Eyre) and the Murray-Darling drainage system to the south. The eastern highlands consist of a broad belt of varied width extending from north Queensland to Tasmania and consisting largely of tablelands, ranges and ridges with only limited mountain areas above 1,000 metres.



Topographic elevation data of Australia on a 6 minute (11 km approximate) grid displayed as an image and processed to give the impression of being illuminated from the west (digital east-west difference image). Such an image gives a good representation of the topography of Australia.

*Bureau of Mineral Resources, Geology & Geophysics.*

## PLATE 2

The present topography results from a long landscape history which can conveniently be started in the Permian, about 290 million years ago, when much of Australia was glaciated by a huge ice cap. After the ice melted parts of the continent subsided and were filled with sediment to form sedimentary basins such as the Great Artesian Basin. By early Cretaceous times, about 140 million years ago, Australia was already so flat and low that a major rise in sea level divided it into three landmasses as the shallow Cretaceous sea spread over the land.

In the following Tertiary times Australia can be regarded as a fairly flat land varied by a number of sedimentary basins (Murray, Gippsland, Eucla, Carpentaria, Lake Eyre and other basins). These slowly filled up and some are now sources of coal or oil.

Between about 100 and 10 million years ago, Australia drifted across the surface of the earth as a "plate", moving north from a position once adjacent to Antarctica. There have been many changes in the climate of Australia in the past, but oddly these are not due to changing latitude. Even when Australia was close to the South Pole the climate was warm and wet, and this climate persisted for a long time despite changes in latitude. It was probably under this climate that the deep weathering profiles and "laterites" that characterise much of Australia were formed.

Today a large part of Australia is arid or semi-arid. However, aridity only seems to have set in after Australia reached its present latitude, and the northern part was probably never arid.

#### *Rivers and lakes*

The rivers of Australia may be divided into two major classes, those of the coastal margins with moderate rates of fall and those of the central plains with very slight fall. Of the rivers of the east coast, the longest in Queensland are the Burdekin and the Fitzroy, while the Hunter is the largest coastal river of New South Wales. The longest river system in Australia is the Murray-Darling which drains part of Queensland, the major part of New South Wales and a large part of Victoria, finally flowing into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australian coast. The length of the Murray is about 2,520 kilometres and the Darling and Upper Darling together are also just over 2,500 kilometres long. The rivers of the north-west coast of Australia, e.g. the Murchison, Gascoyne, Ashburton, Fortescue, De Grey, Fitzroy, Drysdale, and Ord are of considerable size. So also are those rivers in the Northern Territory, e.g. the Victoria and Daly, and those on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert, and Mitchell. The rivers of Tasmania have short and rapid courses, as might be expected from the configuration of the country.

There are many types of lakes in Australia, the largest being drainage sumps from the internal rivers. In dry seasons these lakes finally become beds of salt and dry mud. The largest are Lake Eyre 9,500 square kilometres, Lake Torrens 5,900 square kilometres and Lake Gairdner 4,300 square kilometres.

Other lake types are glacial, most common in Tasmania; volcanic crater lakes predominantly in Victoria and Queensland; fault angle lakes, of which Lake George near Canberra is a good example and coastal lakes formed by marine damming of valleys.

#### **Area, coastline, tropical and temperate zones, and standard times.**

The areas of the States and Territories and the length of the coastline were determined in 1973, by the Division of National Mapping, Department of National Resources, by manually digitising these features from the 1:250,000 map series of Australia. This means that only features of measurable size at this scale were considered. About 60,000 points were digitised at an approximate spacing of 0.5 kilometres. These points were joined by chords as the basis for calculation of areas and coastline lengths by computer.

The approximate high water mark coastline was digitised and included all bays, ports and estuaries which are open to the sea. In these cases, the shoreline was assumed to be where the seaward boundary of the title of ownership would be. In mangroves, the shoreline was assumed to be on the landward side. Rivers were considered in a similar manner but the decisions were rather more subjective, the line being across the river where it appeared to take its true form.

Revised areas and length of coastline, resulting from digitisation using the 1:100,000 map series, are expected to become available during 1986.

## AREA, COASTLINE, TROPICAL AND TEMPERATE ZONES, AND STANDARD TIMES: AUSTRALIA

NOTE: See paragraphs above for methods of estimating area and coastline.

State or Territory	Estimated area		Length of coastline	Percentage of total area		Standard times	
	Total	Percentage of total area		Tropical zone	Temperate zone	Meridian selected	Ahead of G.M.T.(a)
	km <sup>2</sup>		km				hours(b)
New South Wales . . . . .	801,600	10.43	1,900	..	100	150°E	(b)10.0
Victoria . . . . .	227,600	2.96	1,800	..	100	150°E	(b)10.0
Queensland . . . . .	1,727,200	22.48	7,400	54	46	150°E	10.0
South Australia . . . . .	984,000	12.81	3,700	..	100	142°30'E	(b)9.5
Western Australia . . . . .	2,525,500	32.87	12,500	37	63	120°E	8.0
Tasmania . . . . .	67,800	0.88	3,200	..	100	150°E	(b)10.0
Northern Territory . . . . .	1,346,200	17.52	6,200	81	19	142°30'E	9.5
Australian Capital Territory . . . . .	2,400	0.03	35	..	100	150°E	(b)10.0
<b>Australia . . . . .</b>	<b>7,682,300</b>	<b>100.00</b>	<b>36,735</b>	<b>39</b>	<b>61</b>	<b>..</b>	<b>..</b>

(a) Greenwich Mean Time.

(b) For States with 'daylight saving' an hour should be added for this period.

### Climate of Australia

#### General

The climate of Australia is predominantly continental but the insular nature of the land mass is significant in producing some modification of the continental pattern.

The island continent of Australia is relatively dry with 50 per cent of the area having a median rainfall of less than 300 millimetres per year and 80 per cent less than 600 millimetres. Extreme minimum temperatures are not as low as those recorded in other continents because of the absence of extensive mountain masses and because of the expanse of ocean to the south. However, extreme maxima are comparatively high, reaching 50°C over the inland, mainly due to the great east-west extent of the continent in the vicinity of the Tropic of Capricorn.

Climatic discomfort, particularly heat discomfort, is significant over most of Australia. During summer, prolonged high temperatures and humidity around the northern coasts and high temperatures over the inland cause physical discomfort. In winter, low temperatures and strong cold winds over the interior and southern areas can be severe although for relatively short periods.

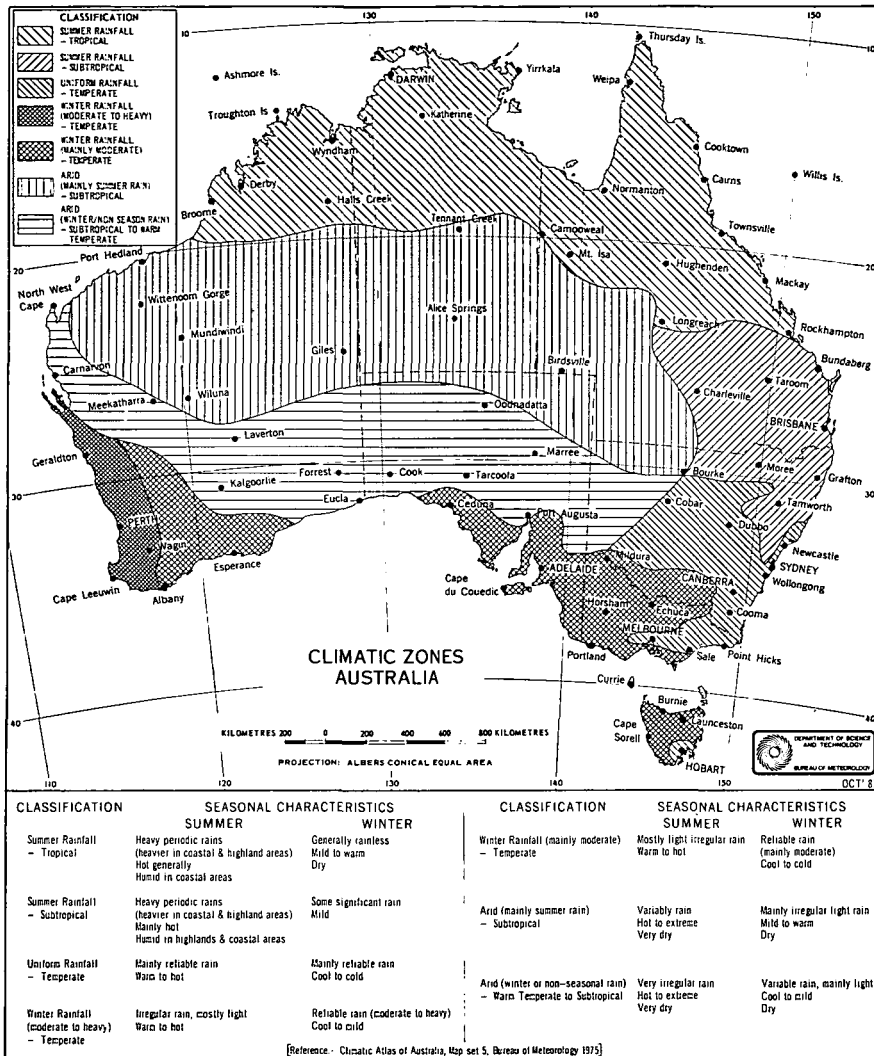
#### Climatic controls

The generally low relief of Australia causes little obstruction to the atmospheric systems which control the climate. A notable exception is the eastern uplands which modify the atmospheric flow.

In the winter half of the year (May–October) anticyclones, or high pressure systems, pass from west to east across the continent and often remain almost stationary over the interior for several days. These anticyclones may extend to 4,000 kilometres along their west-east axes. Northern Australia is then influenced by mild, dry south-east trade winds, and southern Australia experiences cool, moist westerly winds. The westerlies and the frontal systems associated with extensive depressions over the Southern Ocean exert a controlling influence on the climate of southern Australia, causing rainy periods during the winter season. Cold outbreaks, particularly in south-east Australia, occur when cold air of Southern Ocean origin is directed northwards by intense depressions having diameters up to 2,000 kilometres. Cold fronts associated with the southern depressions, or with secondary depressions over the Tasman Sea, may produce extreme day-to-day changes in temperature in southern areas, particularly in south-east coastal regions.

In the summer half of the year (November–April) the anticyclones travel from west to east on a southerly track across the southern fringes of Australia directing easterly winds generally over the continent. Fine, warmer weather predominates in southern Australia with the passage of each anticyclone. Heat waves occur when there is an interruption to the eastward progression of the anticyclone (blocking) and winds back northerly and later north-westerly. Northern Australia comes under the influence of summer disturbances associated with the southward intrusion of warm moist monsoonal air from north of the inter-tropical convergence zone resulting in a hot rainy season.



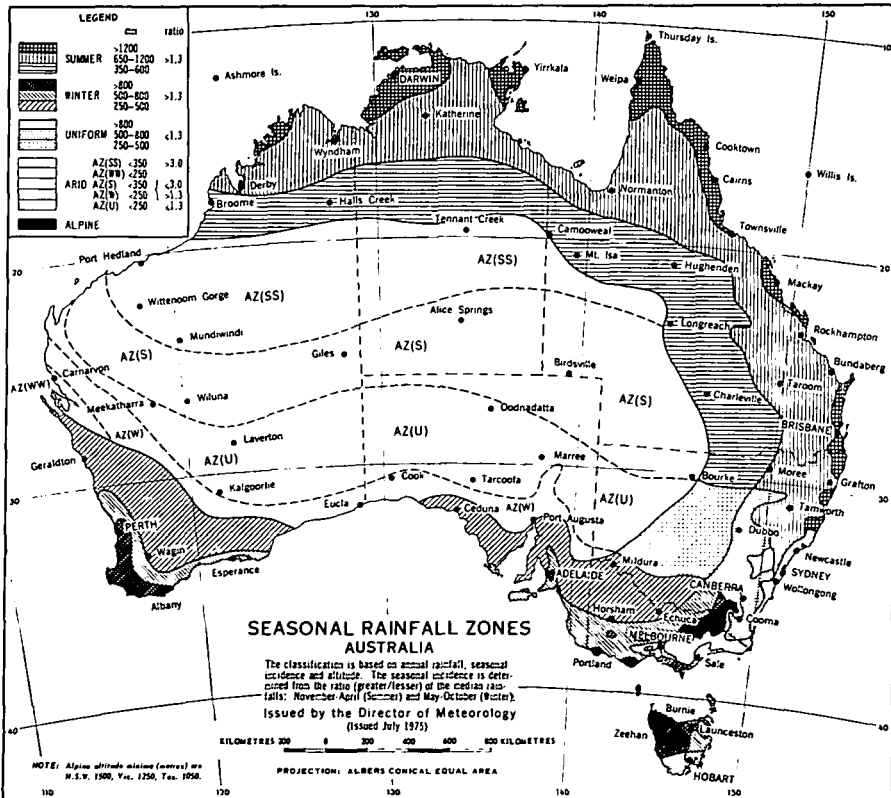
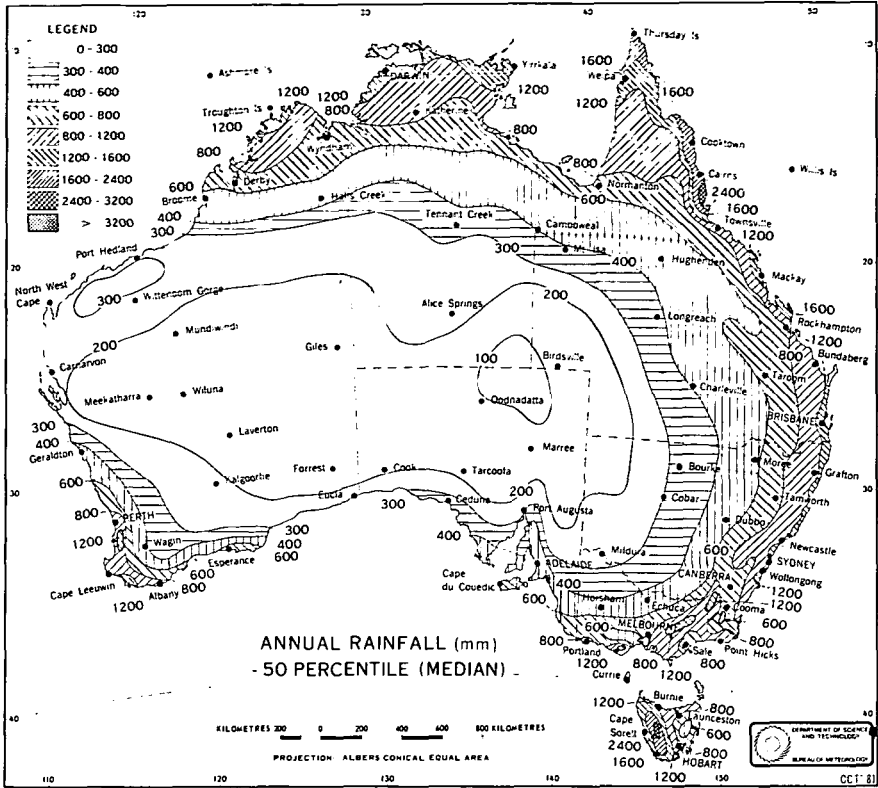


**PLATE 3**

Tropical cyclones develop over the seas to the north-west and the north-east of Australia in summer between November and April. Their frequency of occurrence and the tracks they follow vary greatly from season to season. On the average, about three cyclones per season directly affect the Queensland coast, and about three affect the north and north-west coasts. Tropical cyclones approaching the coast usually produce very heavy rain in coastal areas. Some cyclones move inland, losing intensity but still producing widespread heavy rainfall. Individual cyclonic systems may control the weather over northern Australia for periods extending up to three weeks.

**Rainfall**

*Annual.* The annual 50 percentile (medium) rainfall map is shown on Plate 4. The area of lowest rainfall is east of Lake Eyre in South Australia, where the median rainfall is only about 100 millimetres. Another very low rainfall area is in Western Australia in the Giles-Warburton Range region, which has a median annual rainfall of about 150 millimetres. A vast region extending from the west coast near Shark Bay across the interior of Western Australia and South Australia to south-west Queensland and north-west New South Wales



has a median annual rainfall of less than 200 millimetres. This region is not normally exposed to moist air masses for extended periods and rainfall is irregular, averaging only one or two days per month. However, in favourable synoptic situations, which occur infrequently over extensive parts of the region, up to 400 millimetres of rain may fall within a few days and result in widespread flooding.

The region with the highest median annual rainfall is the east coast of Queensland between Cairns and Cardwell, where Tully has a median of 4,203 millimetres (56 years to 1980 inclusive). The mountainous region of western Tasmania also has a high annual rainfall, with Lake Margaret having a median of 3,575 millimetres (68 years to 1980 inclusive). In the mountainous areas of north-east Victoria and some parts of the east coastal slopes there are small pockets with median annual rainfall greater than 2,500 millimetres, but the map scale is too small for these to be shown.

The Snowy Mountains area in New South Wales also has a particularly high rainfall. The highest median annual rainfall isohyet drawn for this region is 3,200 millimetres, and it is likely that small areas have a median annual rainfall approaching 4,000 millimetres on the western slopes above 2,000 metres elevation.

The following table shows the area 1 distribution of the median annual rainfall.

AREA DISTRIBUTION OF MEDIAN ANNUAL RAINFALL: AUSTRALIA  
(Per cent)

Median annual rainfall	N.S.W.(a)	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Under 200 mm . . . .	8.0	..	10.2	74.2	43.5	..	15.5	29.6
200 to 300 .. . . .	20.3	6.3	13.0	13.5	29.6	..	35.6	22.9
300 .. 400 .. . . .	19.0	19.2	12.3	6.8	10.5	..	9.0	11.2
400 .. 500 .. . . .	12.4	11.8	13.5	3.2	4.3	..	6.6	7.6
500 .. 600 .. . . .	11.3	14.1	11.6	1.8	3.1	12.2	5.8	6.6
600 .. 800 .. . . .	15.1	24.5	20.5	0.5	4.6	18.2	11.6	10.7
800 .. 1,200 .. . .	11.3	17.7	12.6	..	3.7	25.0	9.6	7.7
Above 1,200 .. . . .	2.6	6.4	6.3	..	0.7	44.6	6.3	3.7
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes Australian Capital Territory.

For further information on annual rainfall, see Year Book No. 68.

*Seasonality.* As outlined under the heading of Climatic controls, the rainfall pattern is strongly seasonal in character with a winter rainfall regime in the south and a summer regime in the north.

The dominance of rainfall over other climatic elements in determining the growth of specific plants in Australia has led to the development of a climatic classification based on two main parameters. The parameters are, median annual rainfall and seasonal rainfall incidence. Plate 5, is a reduced version of the seasonal rainfall zones arising from this classification (see Bureau of Meteorology publication *Climatic Atlas of Australia, Map Set 5, Rainfall, 1977*).

Evaporation and the concept of rainfall effectiveness are taken into account to some extent in this classification by assigning higher median annual rainfall limits to the summer zones than the corresponding uniform and winter zones. The main features of the seasonal rainfall are:

- (a) marked wet summer and dry winter of northern Australia;
- (b) wet summer and relatively dry winter of south-eastern Queensland and north-eastern New South Wales;
- (c) uniform rainfall in south-eastern Australia—much of New South Wales, parts of eastern Victoria and in southern Tasmania;
- (d) marked wet winter and dry summer of south-west Western Australia and (to a lesser extent) of much of the remainder of southern Australia directly influenced by westerly circulation;
- (e) arid area comprising about half of the continent extending from the north-west coast of Western Australia across the interior and reaching the south coast at the head of the Great Australian Bight.

**Variability.** The adequate presentation of rainfall variability over an extensive geographical area is difficult.

One index for assessing the variability of annual rainfall is given by the ratio of the 90-10 percentile range to the 50 percentile (median value) i.e.  $\text{Variability Index} = \frac{90 - 10}{50}$

percentiles.

Variability based on this relationship is shown in Plate 6. The region of high to extreme variability lies mostly in the arid zone with summer rainfall incidence, AZ(S), defined on Plate 5. In the winter rainfall zones the variability is generally low to moderate as exemplified by the south-west of Western Australia. In the tropics, random cyclone visitations cause extreme variations in rainfall from year to year: at Onslow (Western Australia), annual totals varied from 15 millimetres in 1912 to 1,085 millimetres in 1961 and, in the four consecutive years 1921 to 1924, the annual totals were 566, 69, 682 and 55 millimetres respectively. At Whim Creek (Western Australia), where 747 millimetres have been recorded in a single day, only 4 millimetres were received in the whole of 1924. Great variability can also occur in the heavy rainfall areas: at Tully (Queensland), the annual rainfalls have varied from 7,898 millimetres in 1950 to 2,486 millimetres in 1961.

For more information on variability, see Year Book No. 68.

**Rainday frequency.** The average number of days per year with rainfall of 0.2 millimetres or more is shown in Plate 7.

The frequency of rain-days exceed 150 per year in Tasmania (with a maximum of over 200 in western Tasmania), southern Victoria, parts of the north Queensland coast and in the extreme south-west of Western Australia. Over most of the continent the frequency is less than 50 rain-days per year. The area of low rainfall with high variability, extending from the north-west coast of Western Australia through the interior of the continent, has less than 25 rain-days per year. In the high rainfall areas of northern Australia rain-days number are about 80 per year, but falls heavier in the region than in southern regions.

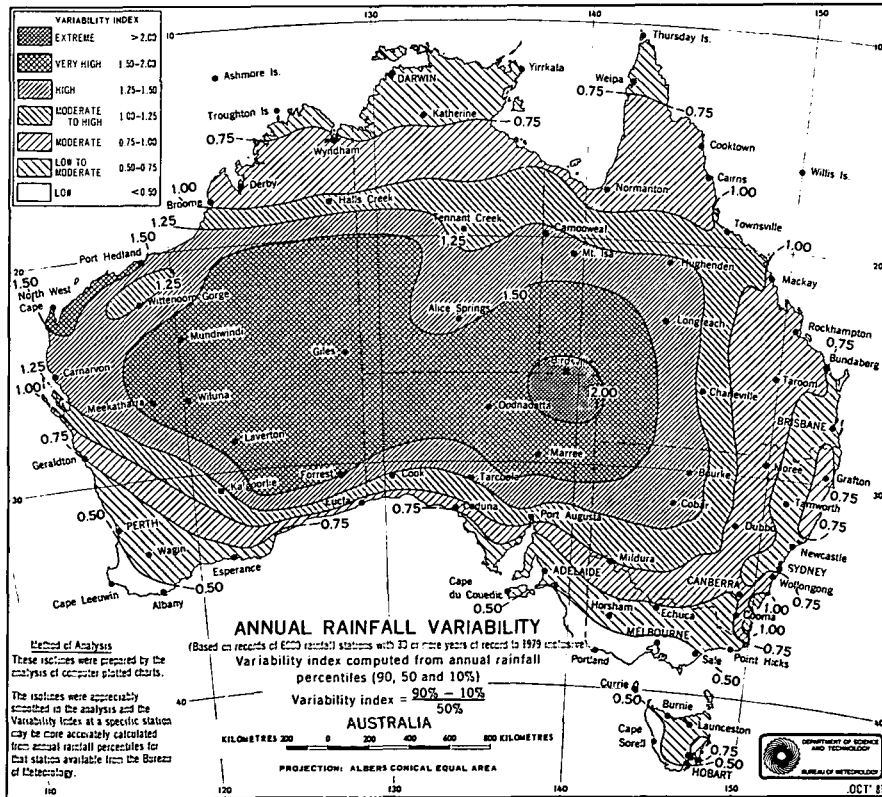
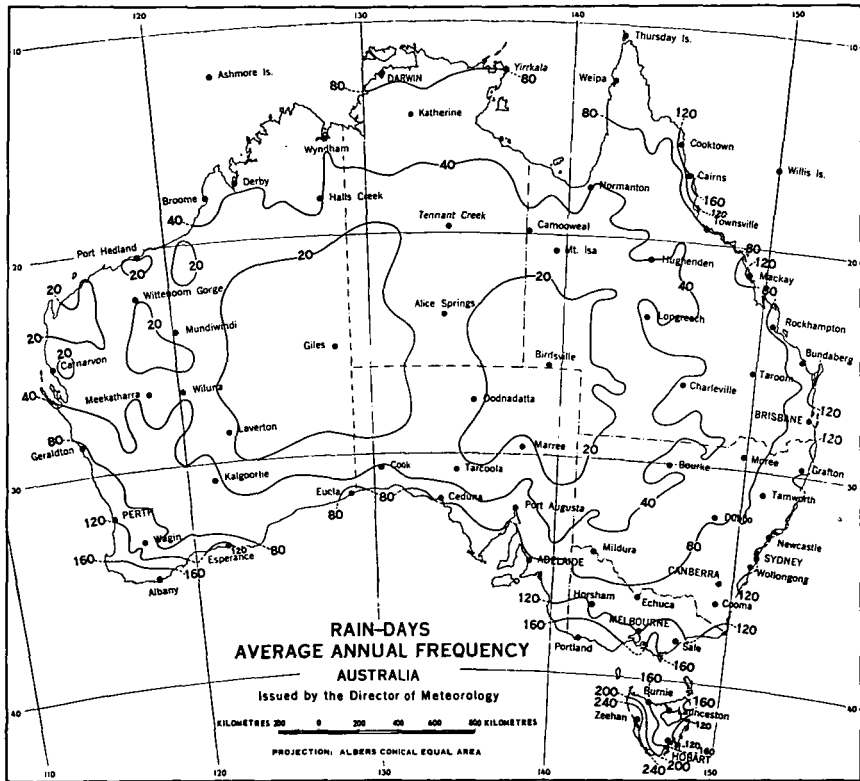


PLATE 6

*Intensity.* The highest annual and daily rainfall are shown in the following table recorded in each State. The highest rainfall measured for one hour is 330 millimetres at Deeral, Queensland, 13 March 1936. The highest 24-hour fall (1,140 millimetres) occurred at Bellenden Ker (Top Station) on 4 January 1979. Bellenden Ker (Top Station) has also recorded the highest monthly and annual rainfall in Australia (5,387 millimetres in January 1979 and 11,251 millimetres in 1979, respectively).

**HIGHEST ANNUAL RAINFALLS**  
(All years to 1985)

State	Station	Year	Amount
			mm
New South Wales . . . . .	Tallowood Point . . . . .	1950	4,540
Victoria . . . . .	Falls Creed SEC. . . . .	1956	3,738
Queensland . . . . .	Bellenden Ker (Top Station) . . . . .	1979	11,251
South Australia . . . . .	Aldgate State School . . . . .	1917	1,851
Western Australia . . . . .	Karnet . . . . .	1964	2,601
Tasmania . . . . .	Lake Margaret . . . . .	1948	4,504
Northern Territory . . . . .	Elizabeth Downs. . . . .	1973	2,966



**PLATE 7**

**HIGHEST DAILY RAINFALLS**  
(All years to October 1984)

<i>State</i>	<i>Station</i>	<i>Date</i>	<i>Amount</i>
			mm
New South Wales . . . . .	Dorrigo . . . . .	21.2.1954	809
	Cordeaux River . . . . .	14.2.1898	574
Victoria . . . . .	Tanybryn . . . . .	22.3.1983	375
	Balook . . . . .	18.2.1951	275
	Hazel Park . . . . .	1.12.1934	267
Queensland . . . . .	Bellenden Ker (Top Station)	4.1.1979	1,140
	Crohamburst . . . . .	3.2.1893	907
	Finch Hatton . . . . .	18.2.1958	878
	Mount Dangar . . . . .	20.1.1970	869
South Australia . . . . .	Stansbury . . . . .	18.2.1946	222
	Stirling . . . . .	17.4.1889	208
Western Australia . . . . .	Whim Creek . . . . .	3.4.1898	747
	Kilto . . . . .	4.12.1970	635
	Fortescue . . . . .	3.5.1890	593
Tasmania . . . . .	Cullenswood . . . . .	22.3.1974	352
	Mathinna . . . . .	5.4.1929	337
Northern Territory . . . . .	Roper Valley . . . . .	15.4.1963	545
	Groote Eylandt . . . . .	28.3.1953	513

*Thunderstorms and hail.* A thunder-day at a given location is a calendar day on which thunder is heard at least once. The average annual number of thunder-days varies from 80 per day near Darwin to less than 10 per year over parts of the southern regions. Convective processes during the summer wet season cause high thunderstorm incidence in northern Australia. The generally high incidence (40-60 annually) over the eastern upland areas is produced mainly by orographic uplift of moist air streams.

For further information on thunderstorms, see Year Book No. 68.

Hail, mostly of small size (less than 10 millimetres diameter), occurs with winter/spring cold frontal activity in southern Australia. Summer thunderstorms, particularly over the uplands of eastern Australia, sometimes produce large hail (greater than 10 millimetres diameter). Hail capable of piercing light gauge galvanised iron occurs at irregular intervals and can cause widespread damage.

*Snow.* Generally, snow covers much of the Australian Alps above 1,500 metres for varying periods from late autumn to early spring. Similarly, in Tasmania the mountains are covered frequently above 1,000 metres during these seasons. The area, depth and duration of falls are highly variable and in the lower altitude range, 500-1,000 metres, no falls occur some years. Snowfalls at levels below 500 metres are occasionally experienced in southern Australia, particularly in the foothill areas of Tasmania and Victoria, but falls are usually light and short lived. In some seasons parts of the eastern uplands above 1,000 metres from Victoria to south-eastern Queensland are covered with snow for several weeks. In ravines around Mt Kosciusko (2,228 metres) small areas of snow may persist through summer but no permanent snowfields remain.

### Temperature

*Average temperatures.* Average annual air temperatures as shown in Plate 8 range from 28° C along the Kimberley coast in the extreme north of Western Australia to 4° C in the alpine areas of south-eastern Australia. Although annual temperature may be used for broad comparisons, monthly temperatures are required for detailed analyses.

July is the month with the lowest average temperature in all parts of the continent. The months with the highest average temperature are January or February in the south and December in the north (except in the extreme north and north-west where it is November). The slightly lower temperatures of mid-summer in the north are due to the increase in cloud during the wet season.

*Average monthly maxima.* Maps of average maximum and minimum temperature for January and July respectively are shown in Plates 9 and 10.

In January, average maximum temperatures exceed 35° C over a vast area of the interior and exceed 40° C over appreciable areas of the north-west. The consistently hottest part of Australia in terms of summer maxima is around Marble Bar, Western Australia (150 kilometres south-east of Port Hedland) where the average is 41° C and daily maxima during summer may exceed 40° C consecutively for several weeks at a time.

The marked gradients of isotherms of maximum temperature in summer in coastal areas, particularly along the south and west coasts, are due to the penetration inland of fresh sea breezes initiated by the sharp temperature discontinuities between the land and sea surfaces. There are also gradients of a complex nature in south-east coastal areas caused primarily by the uplands.

In July a more regular latitudinal distribution of average maxima is evident. Maxima range from 30° C near the north coast to 5° C in the alpine areas of the south-east.

*Average monthly minima.* In January average minima range from 27° C on the north coast to 5° C in the alpine areas of the south-east. In July average minima fall below 5° C in areas south of the tropics (away from the coasts). Alpine areas record the lowest temperatures; the July average is as low as -5° C.

For further information on average monthly maxima and minima, see Year Book No. 68.

*Extreme maxima.* Temperatures have exceeded 45° C at nearly all inland stations more than 150 kilometres from the coast and at many places on the north west and south coasts. Temperatures have exceeded 50° C at some inland stations and at a few near the coast. It is noteworthy that Eucla on the south coast has recorded 50.7° C, the highest temperature in Western Australia. This is due to the long trajectory over land of hot north-west winds from the Marble Bar area. Although the highest temperature recorded in Australia was 53.1° C at Cloncurry (Queensland), more stations have exceeded 50° C in western New South Wales than in other areas due to the long land trajectory of hot winds from the north-west interior of the continent.

Extreme maximum temperatures recorded at selected stations, including the highest recorded in each State, are shown in the following table.

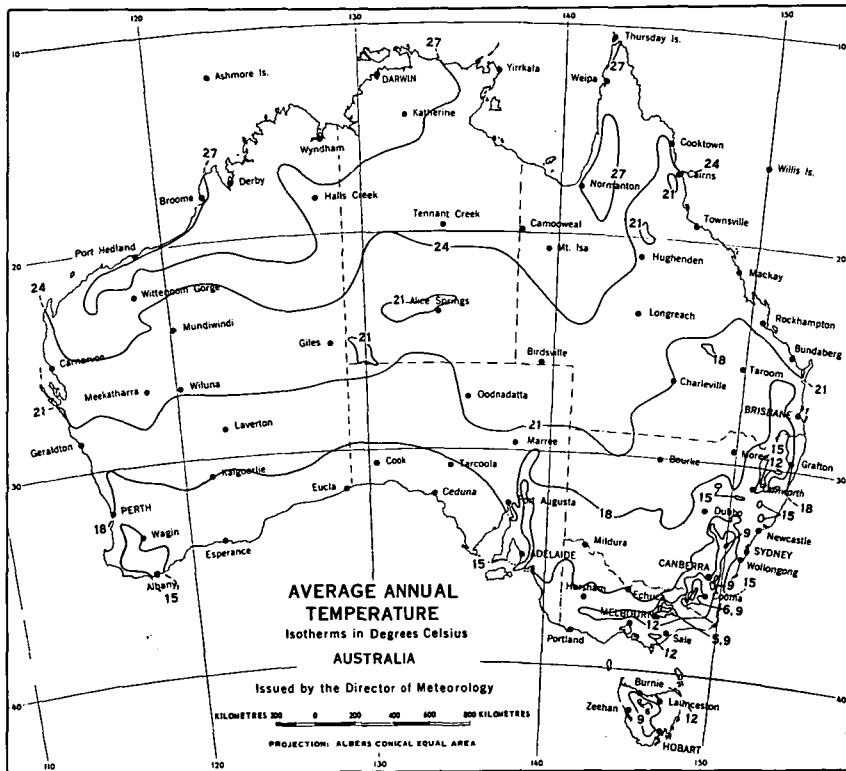


PLATE 8

**EXTREME MAXIMUM TEMPERATURES**  
(All years to September 1985)

Station	°C	Date	Station	°C	Date
<b>New South Wales</b>			<b>Western Australia</b>		
Bourke . . . . .	52.8	17.1.1877	Eucla . . . . .	50.7	22.1.1906
Walgett . . . . .	50.1	2.1.1903	Mundrabilla . . . . .	49.8	3.1.1979
Wilcannia . . . . .	50.0	11.1.1939	Forrest . . . . .	49.8	13.1.1979
<b>Victoria</b>			<b>Tasmania</b>		
Mildura . . . . .	50.8	6.1.1906	Bushy Park . . . . .	40.8	26.12.1945
Swan Hill . . . . .	49.4	18.1.1906	Hobart . . . . .	40.8	4.1.1976
Beulah . . . . .	46.7	31.1.1968	<b>Northern Territory</b>		
<b>Queensland</b>			Finke . . . . .	48.3	2.1.1960
Cloncurry . . . . .	53.1	16.1.1889	Jervois . . . . .	47.5	3.1.1978
Winton . . . . .	50.7	14.12.1888	<b>Australian Capital Territory</b>		
Birdsville . . . . .	50.0	24.12.1972	Canberra . . . . .	42.8	11.1.1939
<b>South Australia</b>					
Oodnadatta . . . . .	50.7	2.1.1960			
Marree . . . . .	49.4	2.1.1960			

*Extreme minima.* The lowest temperatures in Australia have been recorded in the Snowy Mountains, where Charlotte Pass (elevation 1,760 metres) has recorded  $-22.2^{\circ}\text{C}$  on 14 July 1945 and 22 August 1947. Temperatures have fallen below  $-5^{\circ}\text{C}$  at most inland places south of the tropics and at some places within a few kilometres of southern coasts. At Eyre, on the south coast of Western Australia, a minimum of  $-3.9^{\circ}\text{C}$  has been recorded, and at Swansea, on the east coast of Tasmania, the temperature has fallen as low as  $-4.4^{\circ}\text{C}$ .

In the tropics, extreme minima below  $0^{\circ}\text{C}$  have been recorded at many places away from the coasts as far north as Herberton, Queensland ( $-3.3^{\circ}\text{C}$ ). Even very close to the tropical coastline temperatures have fallen to  $0^{\circ}\text{C}$ , a low recording being  $-0.8^{\circ}\text{C}$  for Mackay.

The next table shows extreme minimum temperatures recorded at specified stations, including the lowest recorded in each State.

**EXTREME MINIMUM TEMPERATURES**  
(All years to September 1985)

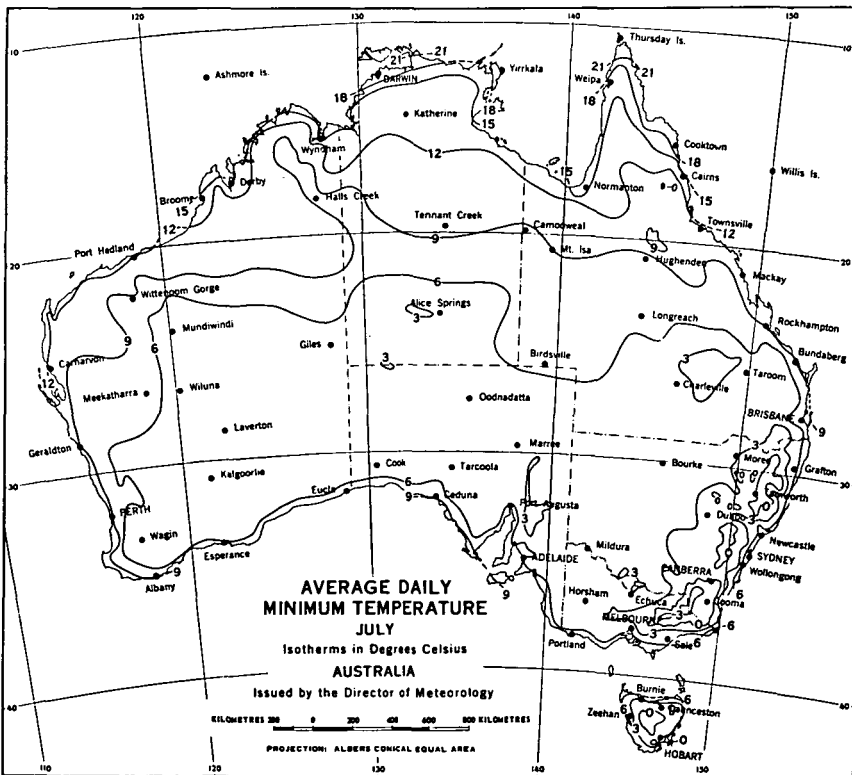
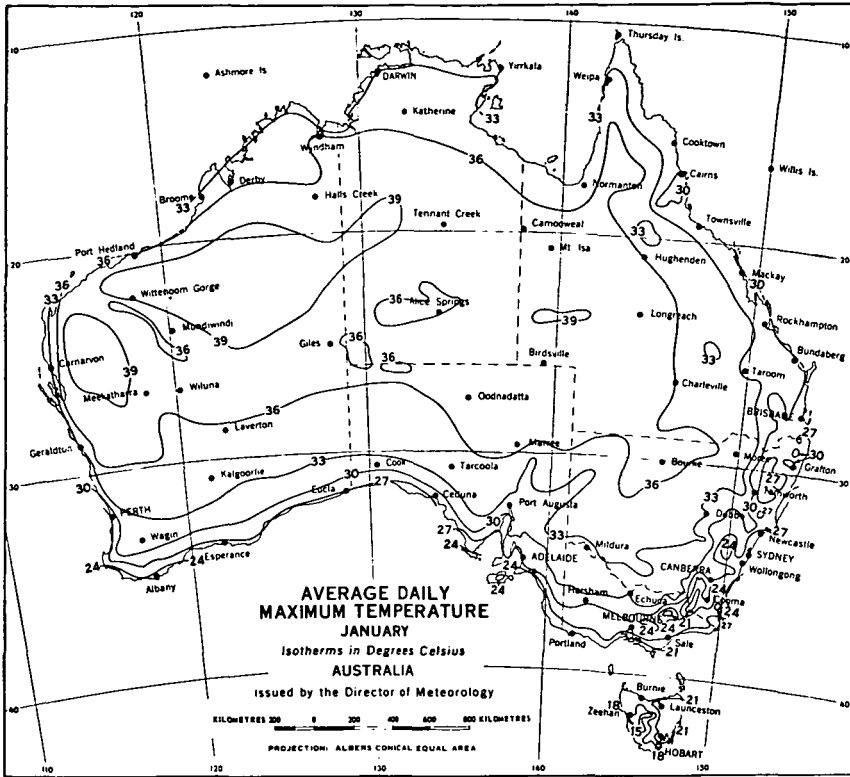
Station	°C	Date	Station	°C	Date
<b>New South Wales</b>			<b>Western Australia</b>		
Charlotte Pass . . . . .	-22.2	14.7.1945	Booylgoo . . . . .	-6.7	12.7.1969
Kiandra . . . . .	-20.6	2.8.1929	<b>Tasmania</b>		
Perisher Valley . . . . .	-19.5	23.7.1979	Shannon . . . . .	-13.0	30.6.1983
<b>Victoria</b>			Butlers Gorge . . . . .	-13.0	30.6.1983
Mount Hotham . . . . .	-12.8	13.8.1947	Tarraleah . . . . .	-13.0	30.6.1983
Omeo . . . . .	-11.7	15.6.1965	<b>Northern Territory</b>		
Hotham Heights . . . . .	-11.1	15.8.1968	Alice Springs . . . . .	-7.5	12.7.1976
<b>Queensland</b>			Tempe Downs . . . . .	-6.9	24.7.1971
Stanthorpe . . . . .	-11.0	4.7.1895	<b>Australian Capital Territory</b>		
Warwick . . . . .	-10.6	12.7.1965	Canberra . . . . .	-10.0	19.7.1924
<b>South Australia</b>					
Yongala . . . . .	-8.2	20.7.1976			
Yunta . . . . .	-7.7	16.7.1976			
Ernabella . . . . .	-7.6	19.7.1983			

*Heat waves.* Periods with a number of successive days having a temperature higher than  $40^{\circ}\text{C}$  are relatively common in summer over parts of Australia. With the exception of the north-west coast of Western Australia, however, most coastal areas rarely experience more than three successive days of such conditions. The frequency increases inland, and periods of up to ten successive days have been recorded at many inland stations. This figure increases in western Queensland and north-western Western Australia to more than twenty days in places. The central part of the Northern Territory and the Marble Bar-Nullagine area of Western Australia have recorded the most prolonged heat waves. Marble Bar is the only station in the world where temperatures of more than  $37.8^{\circ}\text{C}$  ( $100^{\circ}\text{F}$ ) have been recorded on as many as 161 consecutive days (30 October 1923-7 April 1924).

Heat waves are experienced in the coastal areas from time to time. During 11-14 January 1939, for example, a severe heat wave affected south eastern Australia: Adelaide had a record of  $47.6^{\circ}\text{C}$  on the 12th, Melbourne a record of  $45.6^{\circ}\text{C}$  on the 13th and Sydney a record of  $45.3^{\circ}\text{C}$  on the 14th.

The Kimberley district of Western Australia is the consistently hottest part of Australia in terms of annual average maximum temperature. Wyndham, for example, has an annual average maximum of  $35.5^{\circ}\text{C}$ .





### Humidity

Australia is a dry continent in terms of the water vapour content or humidity of the air. Humidity is measured at Bureau of Meteorology observational stations by a pair of dry and wet bulb thermometers mounted in a standard instrument screen. These measurements enable moisture content to be expressed by a number of parameters, two of which are vapour pressure and relative humidity.

Vapour pressure is an actual quantitative measure whereas relative humidity is a ratio (expressed as a percentage). Both of these are included here showing their respective applications but more detailed treatment is given to relative humidity because of its wider usage.

*Vapour pressure.* Vapour pressure is defined as the pressure exerted by the water vapour in the air; and it is a measure of the actual amount of water vapour present. The amount of water vapour does not normally vary greatly during the day, although afternoon sea breezes at coastal stations may bring in moisture to increase the vapour pressure temporarily by amounts up to 5 millibars. The 9 a.m. vapour pressure may be taken to approximate the mean value for the day.

The annual averages range from 9.5 millibars at Hobart to 27.9 millibars at Thursday Island. At the high level station Kiandra (1,400 metres) the annual average is 7.9 millibars. Excluding Kiandra, monthly averages range from 6.7 millibars at inland stations in winter months to 30.9 millibars at Broome in February.

Vapour pressure together with corresponding air temperature have been used to measure climatic discomfort affecting human beings. Comfortable conditions are generally accepted as being within the vapour pressure range 7-17 millibars with respective air temperatures in the range 15-30°C. Above these limits heat discomfort increases and below them cold discomfort increases. The wet bulb temperature may also be used as a simple measure of heat discomfort when this temperature rises above 20°C.

*Relative humidity.* Relative humidity at a given temperature is the ratio (expressed as a percentage) of actual vapour pressure to the saturated vapour pressure at that temperature. As a single measure of human discomfort relative humidity is of limited value because it must be related to the temperature at the time.

Since the temperature at 9 a.m. approximates the mean temperature for the day (24 hours), the relative humidity at 9 a.m. may be taken as an estimate of the mean relative humidity for the day. Relative humidity at 3 p.m. occurs around the warmest part of the day on the average and is representative of the lowest daily values. Relative humidity on the average is at a maximum in the early morning when air temperature is minimal.

The following table contains average relative humidity at 9 a.m. for the year and for each month. Average annual figures on the table range from 34 per cent at Mundiwindi and Marble Bar to 79 per cent at Thursday Island illustrating the range of average relative humidity over Australia. Adelaide has the lowest value for a capital city with an annual average of 60 per cent, compared with Melbourne 69 per cent and Darwin 73 per cent.

Monthly averages shown in the table range from 23 per cent at Mundiwindi in November to 89 per cent at Katanning in June and July. At Alice Springs monthly averages vary from 30 per cent in November to 66 per cent in the winter month of June when low temperatures have the effect of raising relative humidity over the interior. Broome varies from 46 per cent in August to 73 per cent in February, which is a marked seasonal change for a coastal station.

The pattern of variation of relative humidity differs from that of vapour pressure particularly in southern Australia. This is due to the difference in variation of the two parameters with temperature. If the amount of moisture in the air remains constant, vapour pressure decreases slightly with falling temperatures, whereas relative humidity increases. Perth for example has an average 9 a.m. vapour pressure of 14.7 millibars in January and 11.0 in August; and the respective average relative humidity figures (51 and 74 per cent respectively) show a reverse change.

## AVERAGE RELATIVE HUMIDITY AT 9 A.M.

(per cent)

Station	Period of record	Average Relative Humidity at 9 A.M. (per cent)												Year
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Adelaide . . . . .	1909 84	45	49	53	62	74	82	83	78	70	58	49	46	62
Alice Springs . . . . .	1941 84	35	40	41	46	57	65	60	47	35	31	29	29	43
Armidale . . . . .	1907 84	63	68	70	73	78	80	77	71	61	57	56	57	68
Brisbane . . . . .	1936 84	59	60	59	54	52	51	47	44	46	52	55	57	53
Broome . . . . .	1939 84	71	74	69	56	50	49	47	45	49	53	58	64	57
Canberra . . . . .	1939 84	60	66	69	74	81	84	84	78	72	65	60	56	71
Carnarvon . . . . .	1945 84	58	58	57	57	60	69	69	64	54	51	54	57	59
Ceduna . . . . .	1939 84	52	59	61	66	76	82	80	75	64	54	51	51	64
Charleville . . . . .	1942 84	47	53	53	53	63	71	66	56	44	41	36	40	52
Darwin . . . . .	1941 84	82	84	84	76	67	64	64	68	71	71	73	77	73
Esperance . . . . .	1969 84	58	61	65	70	74	78	77	74	68	62	61	57	67
Halls Creek . . . . .	1944 84	51	55	45	34	35	35	31	26	23	25	30	40	36
Hobart . . . . .	1958 84	61	65	68	72	79	81	81	78	71	65	64	62	71
Kalgoorlie . . . . .	1939 84	45	52	54	60	68	75	75	66	55	48	45	43	57
Katanning . . . . .	1957 84	58	65	67	76	84	89	89	87	81	69	60	56	73
Marble Bar . . . . .	1937 84	44	47	40	34	39	43	39	33	27	25	26	33	36
Melbourne . . . . .	1908 84	59	63	65	72	78	82	81	75	68	62	61	59	69
Mildura . . . . .	1946 84	50	55	59	70	82	88	86	79	67	58	52	48	66
Perth . . . . .	1942 84	50	53	57	65	72	78	78	74	68	60	54	51	63
Sydney . . . . .	1955 84	69	73	72	71	71	74	69	66	62	61	63	65	68
Thursday Island . . . . .	1950 84	84	86	85	82	82	81	80	78	75	73	73	78	80
Townsville . . . . .	1940 84	73	76	74	69	68	67	67	63	60	61	63	66	67

For further details on humidity, see Year Book No. 68.

### Sunshine, cloud and fog

*Sunshine.* Sunshine as treated here refers to bright or direct sunshine. Australia receives relatively large amounts of sunshine although seasonal cloud formations have a notable effect on its spatial and temporal distribution. Cloud cover reduces both incoming and outgoing radiation and thus affects sunshine, air temperature and other climatic elements at the earth's surface.

Most of the continent receives more than 3,000 hours of sunshine a year, or nearly 70 per cent of the total possible. In central Australia and the mid-west coast of Western Australia totals slightly in excess of 3,500 hours occur. Totals of less than 1,750 hours occur on the west coast and highlands of Tasmania; this amount is only 40 per cent of the total possible per year (about 4,380 hours).

In southern Australia generally, the duration of sunshine is greatest about December when the sun is at its highest elevation and lowest in June when the sun is lowest. In northern Australia sunshine is generally greatest about August-October prior to the wet season and least about January-March during the wet season.

For further information on sunshine see Year Book No. 68.

*Cloud.* Seasonal changes in cloudiness vary with the distribution of rainfall. In the southern parts of the continent, particularly in the coastal and low lying areas, the winter months are generally more cloudy than the summer months. This is due to the formation of extensive areas of stratiform cloud and fog during the colder months, when the structure of the lower layers of the atmosphere favours the physical processes resulting in this type of cloud. Particularly strong seasonal variability of cloud cover exists in northern Australia where skies are clouded during the summer wet season and mainly cloudless during the winter dry season. Cloud coverage is greater near coasts and on the windward slopes of the eastern uplands of Australia and less over the dry interior.

Darwin has the least average daily coverage of 3.2 eighths and Hobart the highest daily average of 5.0 eighths. The highest daily average for any month occurs at Darwin (5.9 eighths for January) and the lowest daily average is also at Darwin (1.1 eighths for August).

*Fog.* The formation of fog depends on the occurrence of favourable meteorological elements—mainly temperature, humidity, wind and cloud cover. The nature of the local terrain is important for the development of fog and there is a tendency for this phenomenon to persist in valleys and hollows. The incidence of fog may vary significantly over distances as short as one kilometre.

Fog in Australia tends to be greater in the south than the north, parts of the east coastal areas are relatively fog prone even in the tropics. Incidence is much greater in the colder months, particularly in the eastern uplands. Fog may persist during the day but rarely until the afternoon over the interior. The highest fog incidence at a capital city is at Canberra which has an average of 46 days per year on which fog occurs, 28 of which are in the period May to August. Brisbane averages 22 days of fog per year, 17 of which occur between April and September. Darwin averages only 3 days per year, June to September.

### **Winds**

The mid-latitude anticyclones are the chief determinants of Australia's two main prevailing wind streams. In relation to the west-east axes of the anticyclones these streams are easterly to the north and westerly to the south. The cycles of development, motion and decay of low pressure systems to the north and south of the anticyclones result in diversity of wind flow patterns. Wind variations are greatest around the coasts where diurnal land and sea breeze effects are important.

Wind roses for the months of January and July at 9 a.m. and 3 p.m. at selected stations are shown in Plates 11-14 inclusive, extracted from *Climatic Atlas of Australia, Map Set 8, 1979*. The wind roses show the percentage frequency of direction (eight points of compass) and speed ranges of winds.

Orography affects the prevailing wind pattern in various ways such as the channelling of winds through valleys, deflection by mountains and cold air drainage from highland areas. An example of this channelling is the high frequency of northwest winds at Hobart caused by the northwest south-east orientation of the Derwent River Valley.

Perth is the windiest capital with an average wind speed of 15.6 kilometres per hour; Canberra is the least windy with an average speed of 5.8 kilometres per hour.

The highest wind speeds and wind gusts recorded in Australia have been associated with tropical cyclones. The highest recorded gust was 246 kilometres per hour during a cyclone at Onslow, Western Australia on 19 February 1975 and gusts reaching 200 kilometres per hour have been recorded on several occasions in northern Australia with cyclone visitations. The highest gusts recorded at Australian capitals were 217 kilometres per hour at Darwin and 156 kilometres per hour at Perth.

### **Floods**

Widespread flood rainfall may occur anywhere in Australia but it has a higher incidence in the north and in the eastern coastal areas. It is most economically damaging along the shorter streams flowing from the eastern uplands eastward to the seaboard of Queensland and New South Wales. These flood rains are notably destructive in the more densely populated coastal river valleys of New South Wales; the Tweed, Richmond, Clarence, Macleay, Hunter and Nepean-Hawkesbury; all of which experience relatively frequent flooding. Although chiefly summer rains, they may occur in any season.

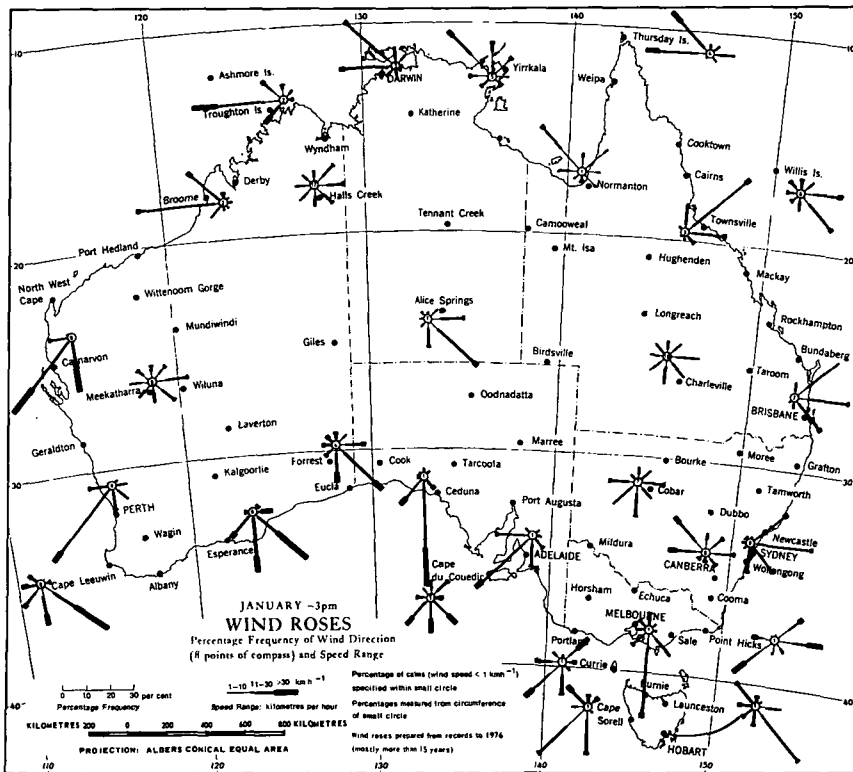
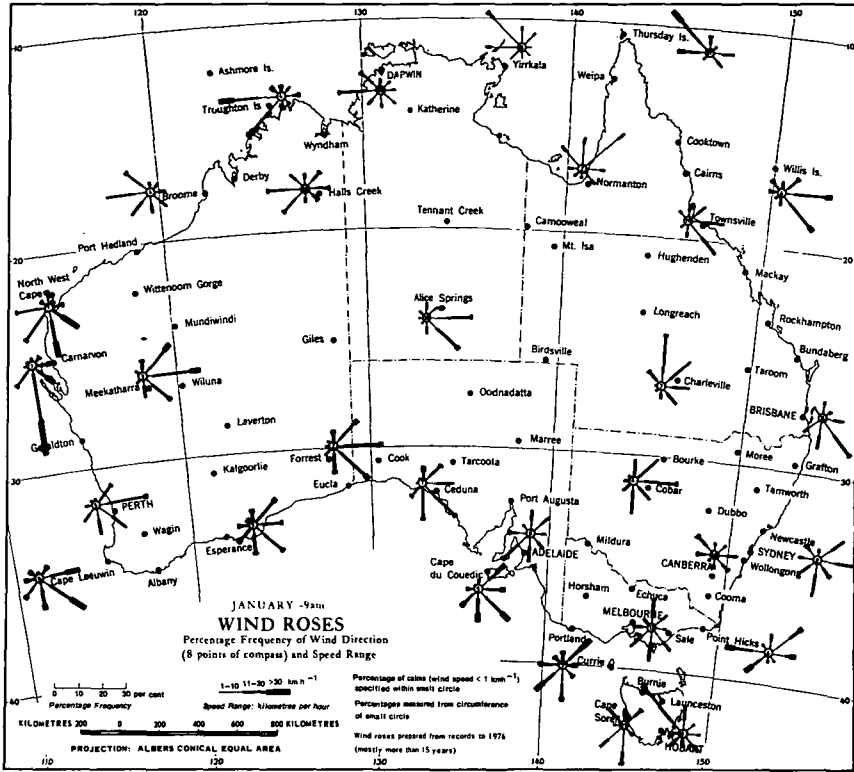
The great Fitzroy and Burdekin river basins of Queensland receive flood rains during the summer wet season. Much of the run-off due to heavy rain in north Queensland west of the eastern uplands flows southward through the normally dry channels of the network of rivers draining the interior lowlands into Lake Eyre. This widespread rain may cause floods over an extensive area, but it soon seeps away or evaporates, occasionally reaching the lake in quantity. The Condamine and other northern tributaries of the Darling also carry large volumes of water from flood rains south through western New South Wales to the Murray and flooding occurs along their courses at times.

Flood rains occur at irregular intervals in the Murray-Murrumbidgee system of New South Wales and Victoria, the coastal streams of southern Victoria and the north coast streams of Tasmania.

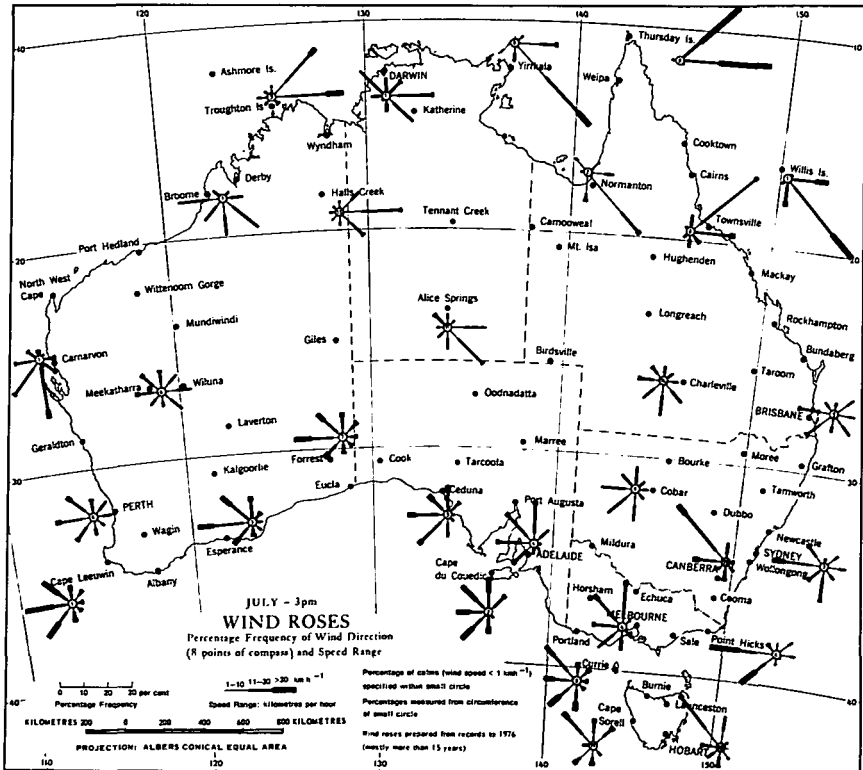
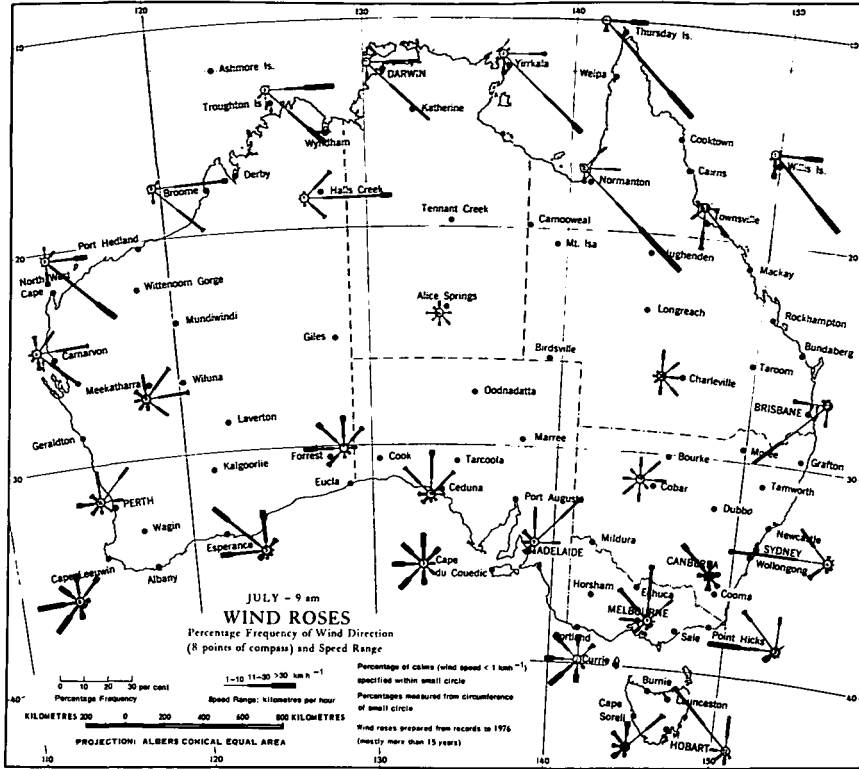
### **Droughts**

Drought, in general terms, refers to an acute water shortage. This is normally due to rainfall deficiency but with other parameters contributing to the actual water availability. The best single measure of water availability in Australia is rainfall; although parameters such as evaporation and soil moisture are significant or even dominant in some situations.

The Bureau of Meteorology publication *Droughts in Australia*, Bulletin No. 43 lists seven major widespread droughts which occurred in the period 1830 to 1955. These covered the following periods; 1864-68, 1880-86, 1888, 1895-1903, 1911-16, 1918-20 and 1939-45. The publication also lists five other droughts of lesser intensity but affecting wide areas, in this period.



PLATES 11 and 12



PLATES 13 and 14

A review of droughts in Australia to 1968 is included in Year Book Australia No. 54, 1968. That review contained a description of the severe drought of 1958-68 making use of the analysis of rainfall deciles.

Since 1968, there have been a number of severe droughts defined by rainfall deficiencies based on decile analyses (see the Bureau's *Drought Review Australia* series, 1968 to date). The most notable of these were the 1970-73 drought over the northeastern goldfields and adjacent areas of Western Australia, the 1975-76 drought over a large part of southeastern Australia and the 1982 drought over eastern Australia.

### Climatic discomfort

In Australia climatic discomfort is significant in most areas. During the summer half of the year (November-April) prolonged high temperatures and humidity around the northern coasts and high temperatures over the inland cause physical stress. In winter, low temperatures and strong cold winds over the interior and southern areas can be severe for relatively short periods. However, cold stress does not cause prolonged physical hardship in Australia at altitudes lower than 1,000 metres, that is, over more than 99 per cent of the continent.

The climatic variables determining physical discomfort are primarily air temperature, vapour pressure and wind. The complete assessment of physical discomfort also requires analyses of such parameters as thermal conductivity of clothing, vapour pressure at the skin and the metabolic heat rate arising from activity of the human body. The cooling system of the human body depends on evaporation of moisture to keep body temperature from rising to lethal levels as air temperature rises. Defining criteria of discomfort is difficult because personal reactions to the weather differ greatly according to a number of variables including health, age, clothing, occupation and acclimatisation. However, climatic strain has been measured experimentally and discomfort indexes based on the average response of subjects under specified conditions have been derived.

For further information see Year Book No. 69.

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During their visit to Australia in October/November 1985, the Prince and Princess of Wales opened a new Visitor Information Centre at the National Botanic Gardens, Canberra. A highlight of the visit was the naming of a native paper daisy in honour of the Princess.

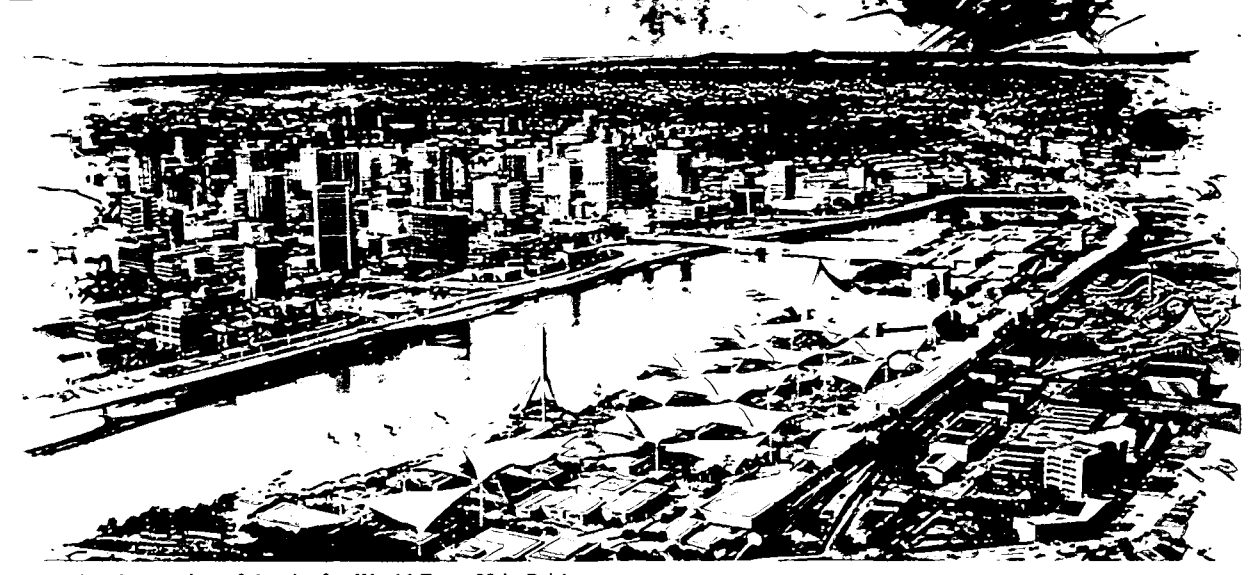
*Helichrysum bracteatum 'Princess of Wales'*

Ron Hotchkiss



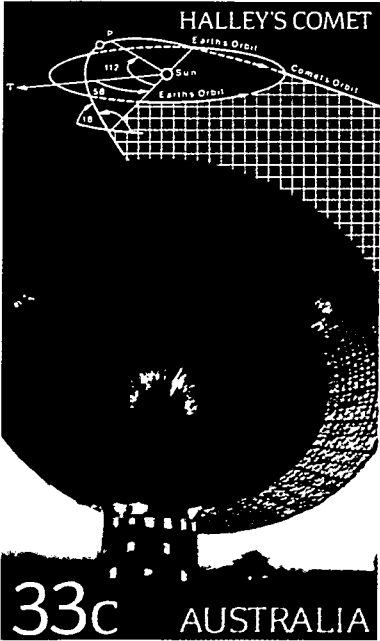
The Prince and Princess of Wales studying a relief model of the National Botanic Gardens.

Australian Information Service



An artist's impression of the site for World Expo 88 in Brisbane.

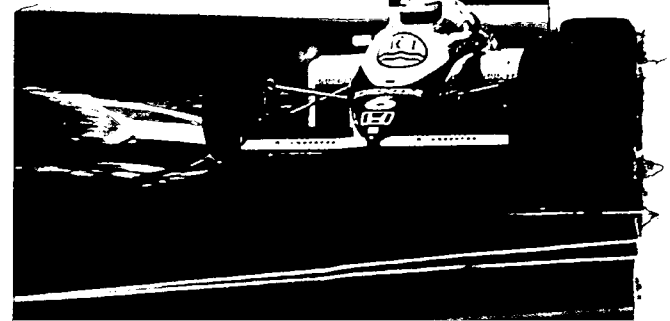
Australian Bicentennial Authority



Postage stamp issued to commemorate the return of Halley's Comet. The reappearance of Halley's Comet in 1985-86 was of special significance to Australia. An article on the Comet appears on page 654.

Australia Post

Keke Rosberg in a Williams Honda on his way to winning the first Formula 1 Grand Prix motor race in Australia. The event was held at Adelaide in November 1985.



The Bicentenary symbol.

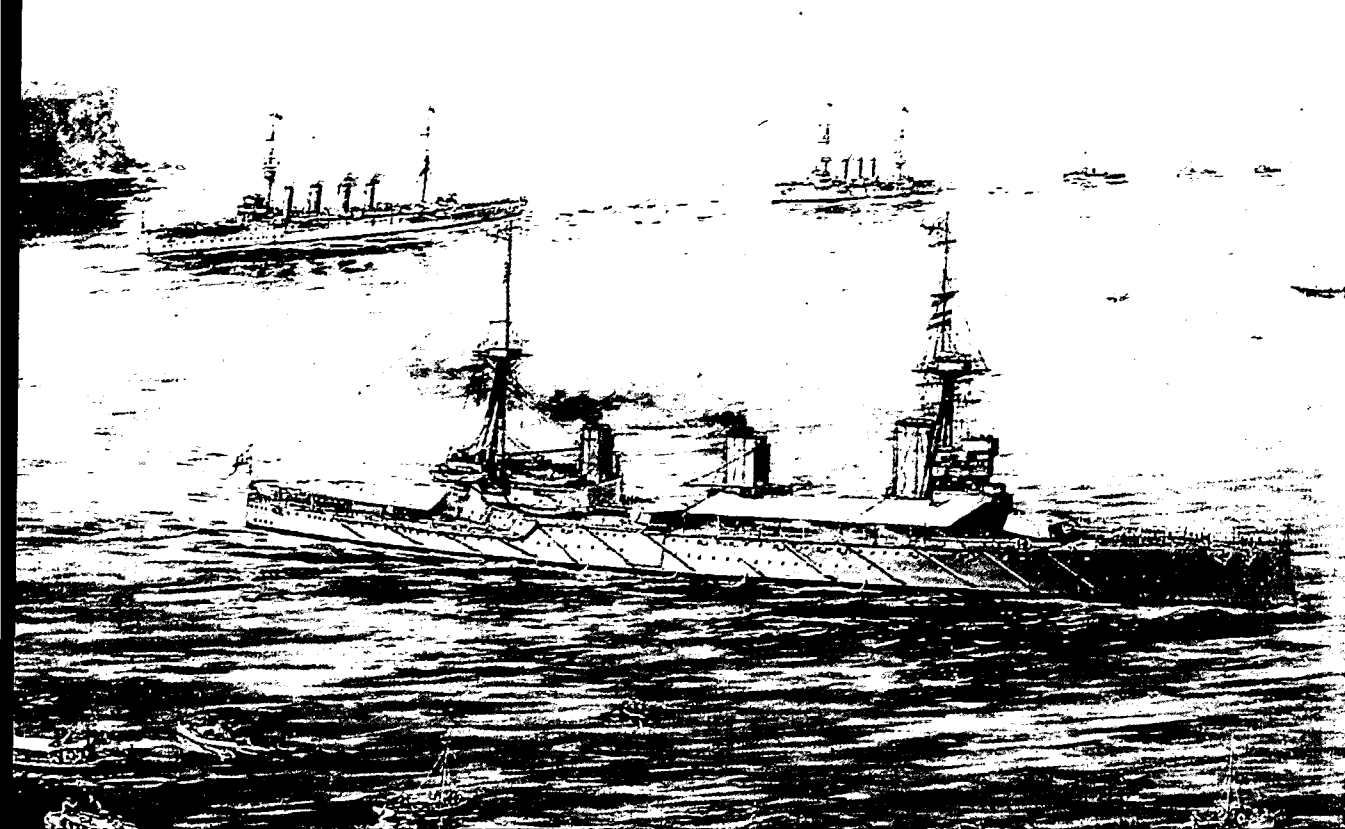
On 26 January 1788 the eleven ships of the First Fleet entered Sydney Harbour to found the first European settlement in Australia. The Bicentenary in 1988 will be an opportune time for Australians to explore their origins, celebrate the achievements of the past and lay foundations for the future. A special article outlining preparations for the Bicentenary commences on page 688.

Bicentenary stamps, featuring drawings made on Captain James Cook's first voyage to Australia.

Australia Post







The battle cruiser HMAS *Australia* leads the first fleet of Royal Australian Navy ships into Sydney Harbour on October 4, 1913. Arrival of the ships came two years after formation of the RAN was approved.

*From the painting by John Bastock.*

Naval achievements are indelibly written into the history of Australia.

A naval officer, Lieutenant James Cook, 'discovered' Australia for England on 20 April 1770, and another naval officer, Captain Arthur Phillip, commanded the First Fleet which landed the first European settlers at Sydney Cove on 26 January 1788. Captain Phillip also was the first 'governor-in-chief' of the new colony of New South Wales and was succeeded as Governor by three more naval officers.

It was a momentous occasion for Australia when, on 10 July 1911, King George V approved the designation 'Royal Australian Navy'. The Naval Board formally promulgated the new designation on 5 October 1911 and pronounced that henceforth Australian naval vessels were to be prefixed with the words: 'His Majesty's Australian Ship' (HMAS). The Board also ordered that all naval ships were to fly the white ensign at the stern and the Australian flag at the jackstaff.

In July 1913 all Royal Navy establishments in Australia were transferred to the Commonwealth and the former Naval Militia was renamed Royal Australian Naval Reserve.

It was an historic day and cause for celebration on 4 October 1913 when, for the first time, the Australian Fleet Unit under the command of Rear-Admiral Sir George Patey, entered Sydney Harbour. There were the big battle cruiser *Australia*, the cruisers *Melbourne*, *Encounter* (on loan from the Admiralty) and *Sydney*, and the destroyers *Parramatta*, *Warrego* and *Yarra*. The ships' arrival ended Britain's responsibility for the Australia Station and Imperial ships still in Australian waters were transferred to New Zealand.

# Royal Australian Navy

## 75th Anniversary

### 1911-1986

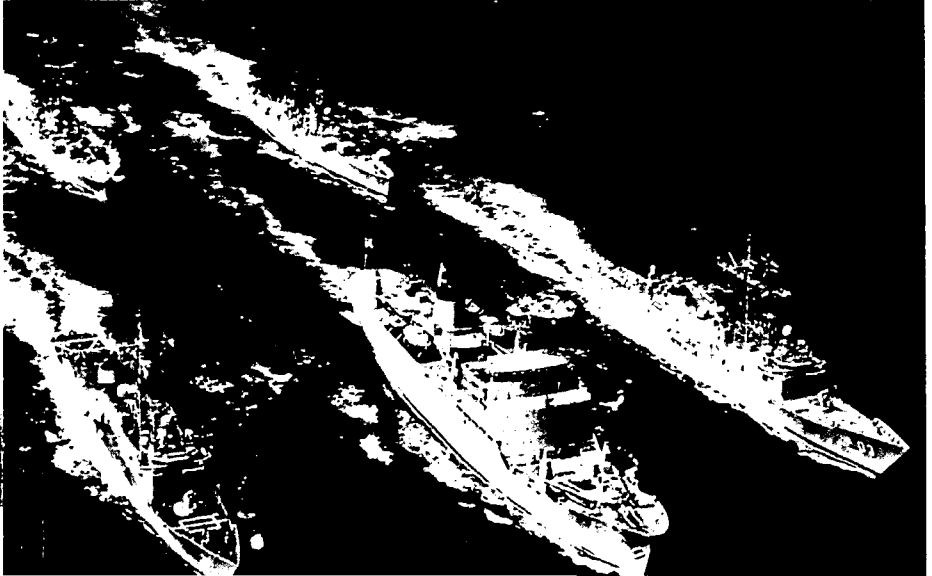


*Photographs—Department of Defence.*

Part of the RAN Task Force entering Sydney Harbour to mark the official beginning of the RAN's 75th Anniversary Year.



A RAN Sea King helicopter and the specially commissioned 75th anniversary white ensign.



Model of the National Naval Memorial, Anzac Parade, Canberra. The Memorial was unveiled by Her Majesty, The Queen on 3 March 1986.



Memorial stained glass window presented to the Garden Island (Sydney) Naval Chapel by the Australian Fleet Air Arm Officers Association. The window depicts the contribution of naval aviation to Australia's defence capability since World War II.

Ships of the RAN have served in both World Wars, in Korea and Vietnam. Nowadays ships of the Australian Fleet patrol and exercise in the Indian, Pacific and Antarctic Oceans, the Coral Sea, Timor Sea, South China Sea and the Sea of Japan, often with ships of allied navies. Joint exercises with the Royal Australian Air Force and Australian Army are a regular part of navy life at sea and ashore.

The Navy's other responsibilities include Oceanography (scientific study of the waters of the earth), Hydrography (mapping the waters of the earth), assistance in national emergencies, Search and Rescue operations and Fisheries surveillance.

## CHAPTER 3

# GENERAL GOVERNMENT

### Parliamentary government

#### Scheme of parliamentary government

Under the Australian Constitution the legislative power of the Commonwealth of Australia is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General. In each Australian State there is a State Governor, who is the representative of the Sovereign for the State. The Governor has such powers within the State as are conferred upon him by the Letters Patent constituting his office, and he exercises these powers in accordance with instructions issued to him by the Sovereign, detailing the manner in which his duties are to be fulfilled.

In the Commonwealth Parliament the Upper House is known as the Senate, and in the bicameral State Parliaments as the Legislative Council. The Legislature in all States was bicameral until 1922 when the Queensland Parliament became unicameral upon the abolition of the Upper House. In the Commonwealth Parliament the Lower House is known as the House of Representatives; in the State Parliaments of New South Wales, Victoria, Queensland and Western Australia as the Legislative Assembly; and in the State Parliaments of South Australia and Tasmania as the House of Assembly. The extent of the legislative powers of each of the seven Parliaments is defined by the Australian and State Constitutions respectively. In those States that have a bicameral legislature, the Legislative Assembly or House of Assembly, as the case may be, is the larger House.

The members of the Parliaments of each State are elected by the people, the franchise extending to Australian citizens who are at least 18 years of age and possess certain residential qualifications. For the Commonwealth Parliament the qualifications for the franchise are identical for both Houses, extending to Australian citizens and British subjects who are on the Commonwealth roll and who are not less than 18 years of age.

#### The Sovereign

On 7 February 1952, the then Governor-General of the Commonwealth of Australia, acting with advice of members of the Federal Executive Council, proclaimed Princess Elizabeth Queen Elizabeth the Second, Queen of this Realm and of all Her other Realms and Territories, Head of the Commonwealth, Defender of the Faith, Supreme Liege Lady in and over the Commonwealth of Australia. The coronation of Her Majesty took place in Westminster Abbey on 2 June 1953. By the *Royal Style and Titles Act 1973*, which Her Majesty assented to in Canberra on 19 October 1973, the Commonwealth Parliament assented to the adoption by Her Majesty, for use in relation to Australia and its Territories, of the Style and Titles set out in the Schedule to the Act. On the same day, also in Canberra, Her Majesty issued a Proclamation, under the Great Seal of Australia, appointing and declaring that Her Majesty's Style and Titles should henceforth be, in relation to Australia and its Territories, 'Elizabeth the Second, by the Grace of God Queen of Australia and Her other Realms and Territories, Head of the Commonwealth'.

#### The Governor-General

*Powers and functions.* Under the Australian Constitution the Governor-General exercises the executive power of the Commonwealth, and certain other powers and functions conferred by the Constitution which include, among others, the powers to appoint times for holding the sessions of the Parliament, to prorogue Parliament, and to dissolve the House of Representatives; to cause writs to be issued for general elections of members of the House of Representatives; to assent in the Queen's name to a proposed law passed by both Houses of the Parliament; to choose and summon Executive Councillors, who hold office during his pleasure; and to appoint Ministers of State for the Commonwealth of Australia. In addition, the command-in-chief of the Defence Force of the Commonwealth of Australia is vested in the Governor-General as the Queen's representative.

Many Acts of the Commonwealth Parliament provide that the Governor-General may make regulations to give effect to the Acts. The Governor-General may also be authorised by statute to issue proclamations—for example, to declare an Act in force. He has been given power by statute to legislate for certain of the Australian Territories. Under the conventions of responsible government obtaining in British Commonwealth countries, the Governor-General's functions are exercised generally on the advice of Ministers of State.

The present Governor-General is His Excellency the Right Honourable Sir Ninian Martin Stephen, A.K., G.C.M.G., G.C.V.O., K.B.E., who has held office since 29 July 1982.

*Holders of office.* The names of those persons who have held the office of Governor-General since the inception of the Commonwealth of Australia are listed in Year Book No. 61.

*Administrators.* In addition to the holders of the office of Governor-General, certain persons have, from time to time, been appointed by the Queen to administer the Government of the Commonwealth of Australia. These persons are appointed in the event of the death, incapacity, removal or absence from Australia of the Governor-General. The names of those persons who have acted as Administrator are also listed in Year Book No. 61 and earlier Year Books.

### Governors of the States

*Powers and functions.* The Queen is represented in each of the Australian States by a Governor, the office having been constituted by Letters Patent issued under the Great Seal of the United Kingdom on various dates. The Governors of the States exercise prerogative powers conferred on them by these Letters Patent, their commissions of appointment and the Governor's Instructions given them under the Royal Sign Manual and Signet or other instrument as specified in the Letters Patent. In addition, they have been invested with various statutory functions by State Constitutions and other Imperial Acts, as well as under the Acts of the Parliaments of the States.

A Governor of a State assents in the Queen's name to Bills passed by the Parliament of the State, except those Bills reserved for the Royal Assent. The latter Bills include certain classes of Bills that are regulated by the State's Constitution and by the Governor's Instructions. He administers the prerogative of mercy by the reprieve or pardon of criminal offenders within his jurisdiction, and may remit fines and penalties due to the Crown in right of the State. In the performance of his functions generally, particularly those conferred by statute, the Governor of a State acts on the advice of Ministers of State for the State.

*Holders of office.* The names of the present (February 1986) State Governors are as follows:

*New South Wales*—His Excellency AIR MARSHAL SIR JAMES ANTHONY ROWLAND, K.B.E., D.F.C., A.F.C.

*Victoria*—His Excellency DR. DAVIS MCCAUGHEY (from 18 February 1986)

*Queensland*—His Excellency SIR WALTER BENJAMIN CAMPBELL, Q.C.

*Western Australia*—His Excellency PROFESSOR GORDON STANLEY REID.

*South Australia*—His Excellency LT-GEN. SIR DONALD BEAUMONT DUNSTAN, K.B.E., C.B.

*Tasmania*—His Excellency SIR JAMES PLIMSOLL, A.C., C.B.E.

### Commonwealth Government Ministries

*Names and tenure of office, 1901 to 1985.* The following list shows the name of each Commonwealth Government Ministry to hold office since 1 January 1901 and the limits of its term of office.

## COMMONWEALTH GOVERNMENT MINISTRIES, 1901 TO DECEMBER 1985

- (i) BARTON MINISTRY, 1 January 1901 to 24 September 1903.
- (ii) DEAKIN MINISTRY, 24 September 1903 to 27 April 1904.
- (iii) WATSON MINISTRY, 27 April 1904 to 17 August 1904.
- (iv) REID-MCLEAN MINISTRY, 18 August 1904 to 5 July 1905.
- (v) DEAKIN MINISTRY, 5 July 1905 to 13 November 1908.
- (vi) FISHER MINISTRY, 13 November 1908 to 2 June 1909.
- (vii) DEAKIN MINISTRY, 2 June 1909 to 29 April 1910.
- (viii) FISHER MINISTRY, 29 April 1910 to 24 June 1913.
- (ix) COOK MINISTRY, 24 June 1913 to 17 September 1914.

- (x) FISHER MINISTRY, 17 September 1914 to 27 October 1915
- (xi) HUGHES MINISTRY, 27 October 1915 to 14 November 1916.
- (xii) HUGHES MINISTRY, 14 November 1916 to 17 February 1917.
- (xiii) HUGHES MINISTRY, 17 February 1917 to 8 January 1918.
- (xiv) HUGHES MINISTRY, 10 January 1918 to 9 February 1923.
- (xv) BRUCE-PAGE MINISTRY, 9 February 1923 to 22 October 1929.
- (xvi) SCULLIN MINISTRY, 22 October 1929 to 6 January 1932.
- (xvii) LYONS MINISTRY, 6 January 1932 to 7 November 1938.
- (xviii) LYONS MINISTRY, 7 November 1938 to 7 April 1939.
- (xix) PAGE MINISTRY, 7 April 1939 to 26 April 1939.
- (xx) MENZIES MINISTRY, 26 April 1939 to 14 March 1940.
- (xxi) MENZIES MINISTRY, 14 March 1940 to 28 October 1940.
- (xxii) MENZIES MINISTRY, 28 October 1940 to 29 August 1941.
- (xxiii) FADDEN MINISTRY, 29 August 1941 to 7 October 1941.
- (xxiv) CURTIN MINISTRY, 7 October 1941 to 21 September 1943.
- (xxv) CURTIN MINISTRY, 21 September 1943 to 6 July 1945.
- (xxvi) FORDE MINISTRY, 6 July 1945 to 13 July 1945.
- (xxvii) CHIFLEY MINISTRY, 13 July 1945 to 1 November 1946.
- (xxviii) CHIFLEY MINISTRY, 1 November 1946 to 19 December 1949.
- (xxix) MENZIES MINISTRY, 19 December 1949 to 11 May 1951.
- (xxx) MENZIES MINISTRY, 11 May 1951 to 11 January 1956.
- (xxxi) MENZIES MINISTRY, 11 January 1956 to 10 December 1958.
- (xxxii) MENZIES MINISTRY, 10 December 1958 to 18 December 1963.
- (xxxiii) MENZIES MINISTRY, 18 December 1963 to 26 January 1966.
- (xxxiv) HOLT MINISTRY, 26 January 1966 to 14 December 1966.
- (xxxv) HOLT MINISTRY, 14 December 1966 to 19 December 1967.
- (xxxvi) McEWEN MINISTRY, 19 December 1967 to 10 January 1968.
- (xxxvii) GORTON MINISTRY, 10 January 1968 to 28 February 1968.
- (xxxviii) GORTON MINISTRY, 28 February 1968 to 12 November 1969.
- (xxxix) GORTON MINISTRY, 12 November 1969 to 10 March 1971.
- (xl) MCMAHON MINISTRY, 10 March 1971 to 5 December 1972.
- (xli) WHITLAM MINISTRY, 5 December 1972 to 19 December 1972.
- (xlii) WHITLAM MINISTRY, 19 December 1972 to 11 November 1975.
- (xliii) FRASER MINISTRY, 11 November 1975 to 22 December 1975.
- (xliv) FRASER MINISTRY, 22 December 1975 to 20 December 1977.
- (xlv) FRASER MINISTRY, 20 December 1977 to 3 November 1980.
- (xlvi) FRASER MINISTRY, 3 November 1980 to 11 March 1983.
- (xlvii) HAWKE MINISTRY, 11 March 1983 to 1 December 1984.
- (xlviii) HAWKE MINISTRY, 1 December 1984.

*Names of Members of each Ministry to 30 November 1984.* In Year Book No.17, 1924, the names are given of each Ministry up to the Bruce-Page Ministry (9 February 1923 to 22 October 1929), together with the names of the successive holders of portfolios therein. Year Book No. 39 contains a list which covers the period between 9 February 1923, the date on which the Bruce-Page Ministry assumed power, and 31 July 1951, showing the names of all persons who held office in each Ministry during that period. The names of members of subsequent Ministries are listed in issues of the Year Book from No. 39 to No. 61 inclusive and in successive issues from No. 64.

This issue shows particulars of the Second Hawke Ministry (at October 1985).

#### **COMMONWEALTH AND STATE LEADERS OF THE GOVERNMENT, OCTOBER 1985**

- Commonwealth*—The Hon. R. J. L. Hawke, A.C., M.P. (Vic.) (A.L.P.)
- New South Wales*—The Hon. N. K. Wran, Q.C., M.L.A. (A.L.P.)
- Victoria*—The Hon. J. Cain, M.L.A. (A.L.P.)
- Queensland*—The Hon. Sir Johannes Bjelke-Petersen, K.C.M.G., M.L.A. (N.P.)
- Western Australia*—The Hon. B. T. Burke, M.L.A. (A.L.P.)
- South Australia*—The Hon. J. C. Bannon, M.H.A. (A.L.P.)
- Tasmania*—The Hon. R. T. Gray, M.H.A. (L.P.)
- Northern Territory*—The Hon. I. L. Tuxworth, M.L.A. (C.L.P.)

## COMMONWEALTH GOVERNMENT

## Second Hawke Ministry

		<i>Representation in other Chamber</i>
*Prime Minister	THE HON. R. J. L. HAWKE, A.C., M.P.	SENATOR BUTTON
*Deputy Prime Minister, Attorney-General, Minister Assisting the Prime Minister for Commonwealth— State Relations and Vice- President of the Executive Council	THE HON. LIONEL BOWEN, M.P.	SENATOR EVANS
*Leader of the Government in the Senate and Minister for Industry and Commerce	SENATOR THE HON. JOHN BUTTON	MR JONES
*Deputy Leader of the Gov- ernment and Manager of Government Business in the Senate and Minister for Community Services	SENATOR THE HON. DON GRIMES	MR HOWE
*Minister for Employment and Industrial Relations and Minister Assisting the Prime Minister for Public Service Industrial Matters	THE HON. RALPH WILLIS, M.P.	SENATOR WALSH
*Treasurer	THE HON. P. J. KEATING, M.P.	SENATOR WALSH
*Special Minister of State and Leader of the House	THE HON. MICHAEL J. YOUNG, M.P.	SENATOR EVANS
*Minister for Finance and Minister Assisting the Prime Minister for Public Service Matters	SENATOR THE HON. PETER WALSH	† MR HURFORD † MR WILLIS
*Minister for Foreign Affairs	THE HON. BILL HAYDEN, M.P.	SENATOR EVANS
*Minister for Education and Minister Assisting the Prime Minister on the Status of Women	SENATOR THE HON. SUSAN RYAN	MR DAWKINS
*Minister for Resources and Energy, Minister Assisting the Prime Minister and Minister Assisting the Min- ister for Foreign Affairs	SENATOR THE HON. GAR- ETH EVANS, Q.C.	MR JONES
*Minister for Trade and Min- ister Assisting the Prime Minister for Youth Affairs	THE HON. J. S. DAWKINS, M.P.	SENATOR BUTTON
*Minister for Primary Industry	THE HON. JOHN KERIN, M.P.	SENATOR WALSH
*Minister for Housing and Construction	THE HON. STEWART WEST, M.P.	SENATOR RYAN
*Minister for Defence	THE HON. KIM C. BEA- ZLEY, M.P.	SENATOR EVANS
*Minister for Immigration and Ethnic Affairs and Minis- ter Assisting the Treasurer	THE HON. CHRIS J. HUR- FORD, M.P.	SENATOR GRIMES
*Minister for Social Security	THE HON. BRIAN L. HOWE, M.P.	SENATOR GRIMES

Minister for Transport and Minister for Aviation	THE HON. PETER MORRIS, M.P.	SENATOR GIETZELT
Minister for Sport, Recre- ation and Tourism and Minister Assisting the Minister for Defence	THE HON. JOHN J. BROWN, M.P.	SENATOR RYAN
Minister for Health	THE HON. NEAL BLEWETT, M.P.	SENATOR GRIMES
Minister for Science and Minister Assisting the Minister for Industry, Technology and Commerce	THE HON. BARRY O. JONES, M.P.	SENATOR BUTTON
Minister for Territories	THE HON. GORDON SCHOLES, M.P.	SENATOR GIETZELT
Minister for Communications and Minister Assisting the Minister for Defence	THE HON. MICHAEL DUFFY, M.P.	SENATOR WALSH
Minister for Arts, Heritage and Environment and Minister Assisting the Prime Minister for the Bicentenary	THE HON. BARRY COHEN, M.P.	SENATOR RYAN
Minister for Aboriginal Affairs	THE HON. A. C. HOLDING, M.P.	SENATOR RYAN
Minister for Veterans' Affairs	SENATOR THE HON. A. T. GIETZELT	MR HOLDING
Minister for Local Govern- ment and Administrative Services	THE HON. TOM UREN, M.P.	SENATOR GIETZELT

\* Minister in Cabinet

† Mr Hurford to represent the Minister for Finance, and Mr Willis to represent the Minister Assisting the Prime Minister for Public Service Matters.

## COMMONWEALTH AND STATE LEADERS OF THE OPPOSITION, OCTOBER 1985

The Leader of the Opposition plays an important part in the Party system of government which operates in the Australian Parliaments. The following list gives the names of the holders of this position in each of the Parliaments in October 1985.

*Commonwealth*—The Hon. J. W. Howard, M.P. (L.P.)

*New South Wales*—The Hon. N. F. Greiner, M.L.A. (L.P.)

*Victoria*—The Hon. J. G. Kennett, M.L.A. (L.P.)

*Queensland*—N. G. Warburton, M.L.A. (A.L.P.)

*Western Australia*—W. R. B. Hassell, M.L.A. (L.P.)

*South Australia*—J. W. Olsen, M.H.A. (L.P.)

*Tasmania*—The Hon. K. S. Wriedt, M.H.A. (A.L.P.)

*Northern Territory*—B. Collins, M.L.A. (A.L.P.)

### Numbers and salaries of Commonwealth Government Ministers

Under sections 65 and 66, respectively, of the Australian Constitution the number of Ministers of State was not to exceed seven, and the annual sum payable for their salaries was not to exceed £12,000 (\$24,000), each provision to operate, however, 'until the Parliament otherwise provides'.

Subsequently the number and salaries have been increased from time to time, and at September 1985 the number of Ministers is 27 and ministerial salaries range from \$21,361 for a Minister other than the Prime Minister, Deputy Prime Minister, Treasurer or Leader of the Government in the Senate to \$47,233 for the Prime Minister. An additional ministerial allowance of \$22,101 a year is payable to the Prime Minister, \$13,034 a year to the Deputy

Prime Minister, \$11,051 a year to the Treasurer, the Leader of the House and the Leader of the Government in the Senate, and \$9,067 a year to other Ministers.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (*see* page 57).

## Parliaments and elections

### The Commonwealth Parliaments

The first Parliament of the Commonwealth of Australia was convened by proclamation dated 29 April 1901 by His Excellency the Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9 May 1901 by H.R.H. the Duke of Cornwall and York. The Rt Hon. Sir Edmund Barton, G.C.M.G., K.C., was Prime Minister.

The following table shows the number and duration of Parliaments since Federation.

#### COMMONWEALTH PARLIAMENTS

<i>Number of Parliament</i>	<i>Date of opening</i>	<i>Date of dissolution</i>
First . . . . .	9 May 1901 . . . . .	23 November 1903
Second . . . . .	2 March 1904 . . . . .	5 November 1906
Third . . . . .	20 February 1907 . . . . .	19 February 1910
Fourth . . . . .	1 July 1910 . . . . .	23 April 1913
Fifth . . . . .	9 July 1913 . . . . .	30 July 1914 (a)
Sixth . . . . .	8 October 1914 . . . . .	26 March 1917
Seventh . . . . .	14 June 1917 . . . . .	3 November 1919
Eighth . . . . .	26 February 1920 . . . . .	6 November 1922
Ninth . . . . .	28 February 1923 . . . . .	3 October 1925
Tenth . . . . .	13 January 1926 . . . . .	9 October 1928
Eleventh . . . . .	6 February 1929 . . . . .	16 September 1929
Twelfth . . . . .	20 November 1929 . . . . .	27 November 1931
Thirteenth . . . . .	17 February 1932 . . . . .	7 August 1934
Fourteenth . . . . .	23 October 1934 . . . . .	21 September 1937
Fifteenth . . . . .	30 November 1937 . . . . .	27 August 1940
Sixteenth . . . . .	20 November 1940 . . . . .	7 July 1943
Seventeenth . . . . .	23 September 1943 . . . . .	16 August 1946
Eighteenth . . . . .	6 November 1946 . . . . .	31 October 1949
Nineteenth . . . . .	22 February 1950 . . . . .	19 March 1951 (a)
Twentieth . . . . .	12 June 1951 . . . . .	21 April 1954
Twenty-first . . . . .	4 August 1954 . . . . .	4 November 1955
Twenty-second . . . . .	15 February 1956 . . . . .	14 October 1958
Twenty-third . . . . .	17 February 1959 . . . . .	2 November 1961
Twenty-fourth . . . . .	20 February 1962 . . . . .	1 November 1963
Twenty-fifth . . . . .	25 February 1964 . . . . .	31 October 1966
Twenty-sixth . . . . .	21 February 1967 . . . . .	29 September 1969
Twenty-seventh . . . . .	25 November 1969 . . . . .	2 November 1972
Twenty-eighth . . . . .	27 February 1973 . . . . .	11 April 1974 (a)
Twenty-ninth . . . . .	9 July 1974 . . . . .	11 November 1975 (a)
Thirtieth . . . . .	17 February 1976 . . . . .	8 November 1977
Thirty-first . . . . .	21 February 1978 . . . . .	19 September 1980
Thirty-second . . . . .	25 November 1980 . . . . .	4 February 1983 (a)
Thirty-third . . . . .	21 April 1983 . . . . .	26 October 1984
Thirty-fourth . . . . .	21 February 1985 . . . . .	

(a) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General under section 57 of the Constitution.

The thirty-third Parliament opened on 21 April 1983 and ended on 26 October 1984 when the House of Representatives was dissolved. Writs were issued by the Governor-General on 26 October 1984 for elections in all States and Territories. The election was announced for 1 December for the House of Representatives and half the Senate. The thirty-fourth Parliament opened on 21 February 1985.

### Qualifications for membership and for franchise—Commonwealth Parliament

Any Australian citizen, 18 years of age or over and who is, or is qualified to become, an elector of the Commonwealth Parliament is qualified for membership of either house of the Commonwealth Parliament. Any Australian citizen (or British subject who was on the Commonwealth Roll as at 25 January 1984) over 18 years of age is qualified to enrol and vote at federal elections. Residence in a subdivision for a period of one month prior to

enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory for all eligible persons.

The principal reasons for disqualification of persons otherwise eligible for election as members of either Commonwealth House are: membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding an office of profit under the Crown (with certain exceptions), or having a pecuniary interest in any agreement with the public service of the Commonwealth except as a member of an incorporated company of more than 25 persons. Persons convicted of treason and not pardoned, or convicted and under sentence for any offence punishable by imprisonment for five years or longer, or of unsound mind, or persons who are holders of temporary entry permits under the *Migration Act 1958* or are prohibited non-citizens under that Act are excluded from enrolment and voting.

#### Commonwealth Parliaments and elections

From the establishment of the Commonwealth of Australia until 1949 the Senate consisted of 36 members, 6 being returned by each of the original federating States. The Australian Constitution empowers the Commonwealth Parliament to increase or decrease the size of the Parliament, and, as the population of Australia had more than doubled since its inception, the Parliament passed the *Representation Act 1948* which provided that there should be 10 Senators from each State instead of 6, thus increasing the total to 60 Senators, enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation. The *Representation Act 1983* further provided for there to be 12 Senators for each State from the first meeting of the thirty-fourth Parliament.

The *Senate (Representation of Territories) Act 1973* made provision for two Senators to be elected from both the Northern Territory and the Australian Capital Territory. Elections for the Territory Senators are held at the same time as general elections for the House of Representatives.

In accordance with the Constitution, the total number of State Members of the House of Representatives must be as nearly as practicable twice the number of State Senators. Consequent upon the increase in the size of the Senate in 1949, the number of State Members was increased from 74 to 121. In 1955 there were 122 State Members; in 1969, 123; in 1974, 124; in 1977, 121; in 1980, 122. From the first meeting of the thirty-fourth Parliament, there was a further increase of 23 to 145 State Members flowing from the increase in the number of State Senators to 72.

Redistribution of the States into electoral divisions have taken place in 1949, 1955, 1968, 1974 (Western Australia only), 1977, 1979 (Western Australia only) and 1984. The quota (or average number) of electors is the basis for electoral distribution, but the Redistribution Committee may vary the enrolment of electorates by up to 10 per cent from the quota in order to achieve equality in enrolment midway between redistributions and to take account of communities of interest, including economic, social and regional interests, means of communication and travel, the trend of population changes, physical features and area, and existing boundaries of electoral divisions.

The Electoral Commissioner determines the representation entitlements of the States during the twelfth month of the life of each Parliament. Determinations are based on the latest population statistics as provided by the Australian Statistician. Should the representation entitlement of a State change, a redistribution is mandatory. The representation entitlements of the States at the four most recent determinations are shown in the following table:

#### REPRESENTATION ENTITLEMENTS OF THE STATES

State	1974	1977	1979	1981	1984
New South Wales . . . . .	45	43	43	43	51
Victoria . . . . .	34	33	33	33	39
Queensland . . . . .	18	19	19	19	24
South Australia . . . . .	12	11	11	11	13
Western Australia . . . . .	10	10	11	11	13
Tasmania . . . . .	5	5	5	5	5
<b>Total . . . . .</b>	<b>124</b>	<b>121</b>	<b>122</b>	<b>122</b>	<b>145</b>



Following the Determination of February 1984, Redistribution Committees were appointed in all States and the Australian Capital Territory. The redistributions were finalised and came into effect progressively from June to October 1984.

The 1984 election was conducted on the new boundaries with 23 additional Divisions.

From 1922 to 1968 the Northern Territory was represented in a limited capacity by one member in the House of Representatives. In May 1968 the *Northern Territory Representation Act 1922* was amended to give full voting rights to the Member for the Northern Territory effective from 15 May 1968, the day on which the Act received Royal Assent.

From 1948 to 1967 the Australian Capital Territory was represented in a limited capacity by one member in the House of Representatives. The Member for the Australian Capital Territory has had full voting rights since 21 February 1967.

Following the passing of the *Australian Capital Territory Representation (House of Representatives) Act 1973* the Australian Capital Territory was divided into two electoral divisions.

Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. At elections for Senators the whole State constitutes the electorate. For the purpose of elections for the House of Representatives the State is divided into single electorates corresponding in number to the number of members to which the State is entitled. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Year Book.

In 1948, amendments to the *Commonwealth Electoral Act 1918* changed the system of scrutiny and counting of votes in Senate elections from the alternative vote to that of proportional representation. The method of voting for both the Senate and the House of Representatives is preferential.

Particulars of voting at Senate elections and elections for the House of Representatives up to 1983 appear in earlier issues of the Year Book. Additional information is available in the *Election Statistics* issued by the Electoral Commissioner following each election and printed as Parliamentary Papers.

The numbers of electors and of primary votes cast for the major political parties in each State and Territory at the latest election for each House of the Commonwealth Parliament were as follows:

**COMMONWEALTH PARLIAMENT ELECTIONS**  
**1 DECEMBER 1984**  
**HOUSE OF REPRESENTATIVES**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Australia</i>
Electors enrolled . . . . .	3,423,624	2,617,291	1,549,749	908,424	858,763	289,142	68,857	150,416	9,866,266
Number of votes recorded for—									
Australian Labor Party . . . . .	1,458,857	1,117,874	605,972	367,915	359,860	113,094	25,140	71,592	4,120,304
Liberal Party . . . . .	990,789	842,423	263,457	337,253	341,450	133,173	..	43,127	2,951,672
National Party . . . . .	318,479	145,435	435,810	11,609	9,817	..	..	..	921,150
Australian Democrats . . . . .	178,793	115,172	66,283	61,822	27,598	10,432	1,906	10,240	472,246
Nuclear Disarmament Party . . . . .	5,438	2,702	..	2,270	2,623	..	..	4,944	17,977
Democratic Labor Party . . . . .	..	49,121	..	..	..	..	..	..	49,121
Socialist Workers Party . . . . .	4,261	1,236	592	1,836	1,535	..	..	..	9,460
Communist Party of									
Australia . . . . .	1,213	..	..	..	..	..	..	..	1,213
Pensioner Party of Australia . . . . .	..	1,645	..	..	..	..	..	..	1,645
Country Liberal Party . . . . .	..	..	..	..	..	..	27,335	..	27,335
Deadly Serious Party . . . . .	..	..	..	..	..	..	..	2,820	2,820
Others . . . . .	65,572	8,925	3,040	2,205	3,791	3,747	1,581	1,436	90,297
Formal votes . . . . .	3,023,402	2,284,533	1,375,154	784,910	746,674	260,446	55,962	134,159	8,665,240
Informal votes . . . . .	198,509	202,740	64,228	74,719	59,801	16,237	2,909	6,982	626,125
<b>Total votes recorded</b>	<b>3,221,911</b>	<b>2,487,273</b>	<b>1,439,382</b>	<b>859,629</b>	<b>806,475</b>	<b>276,683</b>	<b>58,871</b>	<b>141,141</b>	<b>9,291,365</b>

COMMONWEALTH PARLIAMENT ELECTIONS  
1 DECEMBER 1984

## SENATE

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
Electors enrolled	3,423,624	2,617,291	1,549,749	908,424	858,763	289,142	68,857	150,416	9,866,266
Number of votes recorded for									
Australian Labor Party	1,268,489	1,053,488	556,584	340,115	334,371	108,900	26,040	60,789	3,748,776
Liberal/National Coalition	1,130,601	..	..	..	..	..	..	..	1,130,601
Liberal Party	..	816,362	242,937	306,027	313,738	106,427	..	43,725	1,829,216
National Party	..	95,954	404,736	10,756	13,739	..	..	..	525,185
Australian Democrats	223,095	165,624	127,838	91,329	37,369	15,897	2,449	12,559	676,160
Nuclear Disarmament Party	294,772	174,389	61,488	37,834	52,365	7,574	..	14,013	642,435
Call to Australia Group	109,046	30,797	..	22,429	..	..	..	..	162,272
Country Liberal Party	..	..	..	..	..	..	27,972	..	27,972
Democratic Labor Party	..	32,472	..	..	..	..	..	..	32,472
Pensioner Party of Australia	..	19,922	..	4,052	..	..	..	..	23,974
Conservative Party of Australia	..	..	4,651	..	..	..	..	..	4,651
Australian Family Movement	..	..	..	800	18,041	..	..	..	18,841
Senator Brian Harradine Group	..	..	..	..	..	22,992	..	..	22,992
Referendum First Group	..	..	..	..	..	..	..	5,773	5,773
Other	25,689	1,280	1,931	2,628	2,110	..	548	..	34,186
Formal votes	3,051,692	2,390,288	1,400,165	815,970	771,733	261,790	57,009	136,859	8,885,506
Informal votes	181,572	104,906	47,268	46,399	37,739	15,790	1,862	4,307	439,843
<b>Total votes recorded</b>	<b>3,233,264</b>	<b>2,495,194</b>	<b>1,447,433</b>	<b>862,369</b>	<b>809,472</b>	<b>277,580</b>	<b>58,871</b>	<b>141,166</b>	<b>9,325,349</b>

The state of the parties in each House at the commencement of the thirty-fourth Parliament was: *Senate*—Australian Labor Party 35, Liberal Party of Australia 28, National Party of Australia 6, Australian Democrats 6 and Independent 1 (after 30 June 1985, the composition of the Senate was as follows: Australian Labor Party 34, Liberal Party 28, National Party of Australia 5, Australian Democrats 7, Nuclear Disarmament Party 1, Independent 1); *House of Representatives*—Australian Labor Party 82, Liberal Party of Australia 45, National Party of Australia 21.

### Referendums

In accordance with section 128 of the Constitution any proposed law for the alteration of the Constitution, in addition to being passed by an absolute majority of each House of Parliament must be submitted to a referendum of the electors in each State and Territory and must be approved by a majority of the electors in a majority of the States and by a majority of all the voters who voted before it can be presented for Royal Assent.

Since 1901, 38 proposals have been submitted to referendums and the consent of the electors has been received in 8 cases: the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928, the fourth in respect of Social Services in 1946 and the fifth in respect of Aborigines in 1967. The remaining three proposals in relation respectively to Senate casual vacancies, maximum retirement age for justices of the High Court and judges of other Federal Courts and the right of electors in the Territories to vote in referendums for the alteration of the Constitution were approved in May 1977. In addition to referendums for alterations of the Constitution, other Commonwealth referendums have been held—2 prior to Federation regarding the proposed Constitution and 2 regarding military service during the 1914–1918 War. A National song poll was held on 21 May 1977. Voting was preferential and after the distribution of preferences *Advance Australia Fair* became the National song of Australia. For further details of referendums see Year Book No. 52, pages 66–68, Year Book No. 60, pages 90–91, and Year Book No. 62, pages 72–73.

On 26 October 1984 writs were issued for 2 referendum questions to be decided on 1 December 1984. They related to Terms of Senators and the Interchange of Powers between State and Commonwealth Governments. Both questions were defeated. The first referendum question received an overall majority of 112,211 votes throughout Australia but only two States, New South Wales and Victoria, supported it. The second referendum question was defeated by an overall majority of 508,730 votes, and in all of the States. The results of the 2 referendum questions were as follows:

## GENERAL GOVERNMENT

## TERMS OF SENATORS

<i>State</i>	<i>Number of votes given IN FAVOUR of the proposed law</i>	<i>Number of votes given NOT IN FAVOUR of the proposed law</i>	<i>Number of Ballot-papers rejected as INFORMAL</i>
New South Wales . . . . .	1,621,894	1,446,150	148,212
Victoria . . . . .	1,244,451	1,094,760	136,680
Queensland . . . . .	642,768	765,329	39,187
South Australia . . . . .	398,127	398,463	59,636
Western Australia . . . . .	358,502	412,996	35,139
Tasmania . . . . .	102,762	158,777	15,561
Australian Capital Territory . . . . .	76,901	58,764	5,317
Northern Territory . . . . .	28,310	26,265	4,093
<b>Total for the Commonwealth</b>	<b>4,473,715</b>	<b>4,361,504</b>	<b>443,825</b>

## INTERCHANGE OF POWERS

<i>State</i>	<i>Number of votes given IN FAVOUR of the proposed law</i>	<i>Number of votes given NOT IN FAVOUR of the proposed law</i>	<i>Number of Ballot-papers rejected as INFORMAL</i>
New South Wales . . . . .	1,475,971	1,533,799	206,486
Victoria . . . . .	1,139,565	1,146,136	190,190
Queensland . . . . .	578,674	809,249	59,361
Western Australia . . . . .	336,184	423,022	47,431
South Australia . . . . .	355,588	418,433	82,205
Tasmania . . . . .	87,933	165,878	23,289
Australian Capital Territory . . . . .	74,741	58,487	7,754
Northern Territory . . . . .	25,684	28,066	4,918
<b>Total for the Commonwealth</b>	<b>4,074,340</b>	<b>4,583,070</b>	<b>621,634</b>

## The Parliaments of the States

This section contains summarised information; for greater detail refer to State Year Books.

For corresponding particulars for the Commonwealth Parliament, see pages XX-XX.

## STATE PARLIAMENTS: MEMBERSHIP, BY PARTY AFFILIATION, OCTOBER 1985

<i>Party</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>
<b>UPPER HOUSE</b>						
Australian Labor Party (A.L.P.) . . . . .	25	22	..	9	13	1
Independent (Ind.) . . . . .	3	..	..	..	..	18
Liberal Party of Australia (L.P.) . . . . .	10	17	..	11	18	..
National Country Party (N.C.P.) (a) . . . . .	..	..	..	..	1	..
National Party (N.P.) . . . . .	..	..	..	..	1	..
National Party of Australia (N.S.W.) (N.P.A.) . . . . .	6	..	..	..	1	..
National Party of Australia (Victoria) (N.P.A.) . . . . .	..	5	..	..	..	..
National Party of Australia (W.A.) (N.P.A.) . . . . .	..	..	..	..	1	..
Australian Democrats (A.D.) . . . . .	1	..	..	2	..	..
<b>Total</b> . . . . .	<b>45</b>	<b>44</b>	<b>(b)</b>	<b>22</b>	<b>34</b>	<b>19</b>
<b>LOWER HOUSE</b>						
Australian Labor Party (A.L.P.) . . . . .	58	47	32	23	32	14
Independent (Ind.) . . . . .	5	..	1	..	1	2
Independent Labor (Ind. Lab.) . . . . .	..	..	..	2	..	..
Liberal Party of Australia (L.P.) . . . . .	21	31	6	21	19	19
National Country Party (N.C.P.) (a) . . . . .	..	..	..	1	3	..
National Party (N.P.) . . . . .	..	..	43	..	2	..
National Party of Australia (N.S.W.) (N.P.A.) . . . . .	15	..	..	..	..	..
National Party of Australia (Victoria) (N.P.A.) . . . . .	..	10	..	..	..	..
Australian Democrats (A.D.) . . . . .	..	..	..	..	..	..
<b>Total</b> . . . . .	<b>99</b>	<b>88</b>	<b>82</b>	<b>47</b>	<b>57</b>	<b>35</b>

(a) Formerly the National Alliance Party. (b) Upper House abolished in 1922.

**PARLIAMENTARY GOVERNMENT MEMBERS—ANNUAL SALARIES AND  
ALLOWANCES, OCTOBER 1985**

Members in—	Cwlth	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Total
<b>NUMBER OF MEMBERS</b>									
Upper House. . . .	76	45	44	(a)	22	34	19	..	240
Lower House. . . .	148	99	88	82	47	57	35	25	581
<b>Total . . . .</b>	<b>224</b>	<b>144</b>	<b>132</b>	<b>82</b>	<b>69</b>	<b>91</b>	<b>54</b>	<b>25</b>	<b>821</b>
<b>ANNUAL SALARY (a) (\$)</b>									
Upper House. . . .	(b) 41,802	40,587	42,389	..	37,500	40,800	35,530	..	..
Lower House. . . .	(b) 41,802	40,587	42,389	42,544	37,500	40,800	35,530	41,720	..
<b>ELECTORAL ALLOWANCES (\$)</b>									
Upper House. . . .	15,200	(c)13,273	12,163– 17,637	..	11,500	11,535	(c)3,908– 25,954	..	..
Lower House. . . .	(d) 15,200– 22,040	(c)13,273– 23,690	(d)12,163– 17,637	(c)10,472– 26,878	7,785– 28,800	10,681– 25,100	(c)5,330– 12,436	(c)7,000– 13,500	..

(a) Basic rates (payable to backbenchers, etc.) only; additional rates apply for Ministers, etc. (b) Certain additional allowances are also provided for holders of parliamentary offices, etc. (c) Allowances payable depends on location of electorate and, for Victoria, Tasmania and Western Australia, size of electorate. In N.S.W. a special expense allowance for members of the Lower House of \$8,136 is paid to members representing country electorates with members of the Upper House, who reside in country districts, receiving \$5,410–\$8,136. (d) A member of the House of Representatives representing an electorate of less than 5,000 square kilometres receives an electorate allowance at the rate of \$15,200 p.a.; a member representing an electorate with a population of 140,000 or more receives \$18,460 p.a.; a member representing an electorate of 5,000 square kilometres or more receives an electorate allowance at the rate of \$22,040 p.a.

### Outlay on parliamentary government

The accompanying table shows, in broad groups, the expenditure incurred in the operation of the parliamentary system in Australia, comprising the Governor-General and Governors, the Ministries, the Upper and Lower Houses of Parliament, and electoral activities; *it does not attempt to cover the expenditure on Commonwealth and State administration generally.* Only broad groups are shown, but even these are not entirely comparable because of differences in accounting procedures and in the presentation of accounts. Expenditure under the head of Governor-General or Governor includes salaries of Government House staffs and maintenance of residences, official establishments, grounds, etc., and expenditure on capital works and services.

#### OUTLAY ON PARLIAMENTARY GOVERNMENT, 1983–84 (\$'000)

Expenditure group	Cwlth	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Total
Governor-General, Governor or									
Administrator (a) . . . . .	3,211	1,283	1,432	818	641	599	835	802	9,622
Ministry (b) . . . . .	4,388	1,953	1,905	2,717	904	705	947	1,610	15,129
Parliament—									
Upper House (c) . . . . .	5,776	2,157	2,454	..	1,295	2,544	869	..	15,095
Lower House (c) . . . . .	7,182	4,718	4,144	3,528	2,564	3,834	1,251	1,724	28,945
Both Houses (d) . . . . .	49,717	17,377	15,081	7,140	4,975	5,384	1,955	1,444	103,074
Miscellaneous (e) . . . . .	25,866	869	2,244	2,992	2,571	1,010	365	60	35,977
<b>Total, Parliament. . . . .</b>	<b>88,541</b>	<b>25,121</b>	<b>23,924</b>	<b>13,660</b>	<b>11,405</b>	<b>14,076</b>	<b>4,440</b>	<b>5,640</b>	<b>183,091</b>
Electoral (f) . . . . .	32,642	7,372	530	4,042	651	2,143	385	239	48,004
Royal Commissions, Select									
Committees, etc. . . . .	8,526	2,312	590	34	119	503	41	47	12,172
<b>Grand Total . . . . .</b>	<b>137,308</b>	<b>38,041</b>	<b>28,381</b>	<b>21,272</b>	<b>13,721</b>	<b>16,722</b>	<b>6,648</b>	<b>5,926</b>	<b>268,019</b>

(a) Salaries and other expenses, including maintenance of house and grounds. (b) Salaries, travelling and other expenses as ministers. (c) Allowances to members (including ministers' salaries as members), travelling and other expenses. (d) Government contribution to members' superannuation funds, printing, reporting staff, library, etc. (e) Services, furniture, stores, etc. (f) Salaries, cost of elections, etc.

## OUTLAY ON PARLIAMENTARY GOVERNMENT

Year	Cwth(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.(b)	Total
TOTAL (\$'000)									
1978-79	70,424	19,315	16,512	12,516	7,904	9,517	5,382	2,468	144,038
1979-80	74,037	17,794	17,460	13,822	8,922	10,544	6,439	3,629	152,647
1980-81	97,293	19,582	19,290	19,487	9,227	11,180	7,319	4,345	187,723
1981-82	103,276	27,508	27,610	23,738	10,829	12,916	8,046	2,948	216,872
1982-83	132,307	29,431	28,544	20,654	13,254	15,301	6,445	4,074	250,011
1983-84	137,308	38,041	28,381	21,272	13,721	16,722	6,648	5,926	268,019

PER HEAD OF POPULATION  
(\$)

1977-78	4.89	3.35	3.48	4.56	5.84	6.64	11.20		9.12
1978-79	4.88	3.81	4.26	5.69	6.08	7.66	12.89	22.60	9.98
1979-80	5.07	3.47	4.48	6.15	6.84	8.35	15.29	32.03	10.46
1980-81	6.57	3.76	4.91	8.44	7.03	8.70	17.21	36.36	12.68
1981-82	6.87	5.22	6.95	9.95	8.17	9.81	18.76	23.42	14.41
1982-83	8.66	5.52	7.11	8.44	9.93	11.32	14.96	30.98	16.36
1983-84	8.77	7.06	7.13		10.18	12.00	15.29	41.94	

(a) Includes appropriations for the construction of the new Commonwealth Parliament House which amounted to \$500,000 in 1979-80, \$7,500,000 in 1980-81, \$23,100,000 in 1981-82 and \$53,700,000 in 1982-83.

(b) From 1981-82 more detailed information has been obtained which has allowed a more accurate calculation of the cost of parliamentary government in the Northern Territory. Figures for earlier years on the revised basis are not available.

### Acts of the Commonwealth Parliaments

In the Commonwealth Parliament all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Australian Constitution. In all States, other than South Australia and Tasmania, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly. In South Australia and Tasmania laws are enacted in the name of the Governor of the State, with the advice and consent of the Parliament in the case of South Australia, and of the Legislative Council and House of Assembly in the case of Tasmania. Generally, assent to Bills passed by the Legislatures is given by the Governor-General or State Governor acting on behalf of, and in the name of, the Sovereign. In certain special cases Bills are reserved for the Royal Assent. The Parliaments of the States are empowered generally, subject to the Australian Constitution, to make laws in and for their respective States in all cases whatsoever. Subject to certain limitations they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth Parliament, the latter law prevails and the former law is, to the extent of the inconsistency, invalid.

#### The enactment/history of Commonwealth Parliament legislation

The legislation passed by the Commonwealth Parliament between 1901 and 1973, and which was then still in operation, is published in a consolidated form entitled *Acts of the Parliament 1901-1973*. Since 1974, annual volumes of Acts have also been published. The consolidation contains a chronological table of Acts passed from 1901 to 1973, showing how they are affected by subsequent legislation or lapse of time, together with a table of legislation of the Commonwealth Parliament passed from 1901 to 1973 in relation to the several provisions of the Australian Constitution. Reference should be made to these for complete information.

The number of enactments of the Commonwealth Parliament since 1901 has considerably increased, in 1983 147 enactments were passed.

### National Anthem and Colours of Australia

Details of the official proclamation issued on 19 April 1984 is as follows:

His Excellency, the Governor-General of the Commonwealth of Australia, issued the following Proclamation on 19 April 1984:

I, SIR NINIAN MARTIN STEPHEN, Governor-General of the Commonwealth of Australia, acting with the advice of the Federal Executive Council, hereby declare:

- (a) that the anthem "God Save The Queen" shall henceforth be known as the Royal Anthem and be used in the presence of Her Majesty The Queen or a member of the Royal Family;
- (b) that the National Anthem shall consist of the tune known as "Advance Australia Fair" with the following words:

*Australians all let us rejoice,  
For we are young and free;  
We've golden soil and wealth for toil;  
Our home is girt by sea;  
Our land abounds in nature's gifts  
Of beauty rich and rare;  
In history's page, let every stage  
Advance Australia Fair.  
In joyful strains then let us sing,  
Advance Australia Fair.  
Beneath our radiant Southern Cross  
We'll toil with hearts and hands;  
To make this Commonwealth of ours  
Renowned of all the lands;  
For those who've come across the seas  
We've boundless plains to share;  
With courage let us all combine  
To Advance Australia Fair.  
In joyful strains then let us sing,  
Advance Australia Fair.*

- (c) that the Vice-Regal Salute to be used in the presence of His Excellency The Governor-General shall consist of the first four bars and the last four bars of the tune known as "Advance Australia Fair";
- (d) that the National Anthem shall be used on all official and ceremonial occasions, other than occasions on which either the Royal Anthem or the Vice-Regal Salute is used; and
- (e) that green and gold (Pantone Matching System numbers 116C and 348C as used for printing on paper) shall be the national colours of Australia for use on all occasions on which such colours are customarily used.

### National Flag

For information on Australia's National Flag see the special article in Year Book No. 67, pages 23-28.

## CHAPTER 4

### DEFENCE

This chapter outlines Australia's defence policy and its defence relationship with other countries; the higher defence organisation, the functions, organisations, manning and training of the three Services; the functions and activities of the Defence Science and Technology Organisation the Natural Disasters Organisation and the Office of Defence Production.

Further information on current defence planning and activities is available in the Defence Report and other publications of the Department of Defence, and in statements to the House of Representatives by the Minister for Defence.

#### Current defence policy

Australian defence policy is primarily directed to the development of independent, and within resource constraints, increasingly self-reliant defence capabilities to deter and, if necessary, defeat military threats against Australia and its direct interests.

Planning for Australia's defence is not based on meeting particular threats. Rather it recognises that there are a number of possible contingencies which, were they to arise, would have consequences for our security. Particular attention is given to the capabilities of the Defence Force to deal with lesser threats or contingencies, such as limited harassments, raids, incursions, etc., that could arise at short notice and to ensure that there are options for a future government to expand defence capability in response to changes in the strategic outlook.

The security and stability of our immediate neighbourhood is of major strategic importance to Australia and the continued development of an independent defence capability enhances our ability to contribute to the peaceful development of that region. Priority in defence activity is consequently given to areas close to Australia and high value is placed on fostering our defence relationships with the countries of South East Asia and the South West Pacific.

Australia's security arrangements with the United States and New Zealand remain an important element of our defence policy. Although trilateral defence cooperation activities under the ANZUS alliance have been in abeyance due to the New Zealand Government's policy on visits by nuclear-powered and nuclear-weapon capable warships, the ANZUS Treaty itself remains in force and continues to provide a background for a wide range of mutually beneficial bilateral defence cooperative activities with the United States. At the same time cooperative activities undertaken with New Zealand continue to sustain Australia's close defence relationship with that country.

#### Higher defence organisation

The higher organisation of the Defence Force is dealt with the *Defence Act 1903*, which provides that responsibility for the general control and administration of the Defence Force rests with Minister for Defence.

*Chief of the Defence Force:* Under section 9 (2) of the *Defence Act 1903* the Chief of the Defence Force is vested with the command of the Defence Force. The Chief of the Defence Force is the chief military adviser to the Minister and in addition the Chief of the Defence Force has, with the Secretary, the joint administration of the Defence Force as specified below.

*Secretary, Department of Defence:* The Secretary has the normal powers and responsibilities of a Departmental Secretary under the Public Service Act, the Audit Act and Finance Regulations. In addition to these powers, section 9A of the *Defence Act 1903* makes the Secretary and the Chief of the Defence Force jointly responsible for the administration of the Defence Force (except for the matters falling within the command of the Defence Force or any other matter specified by the Minister). The Secretary is the principal civilian adviser to the Minister for Defence and is responsible to the Minister for advice on general policy and on the management and utilisation of defence resources.

### Higher Defence Machinery

An extensive committee system operates in the higher defence organisation to facilitate the formulation of policy for the achievement of government defence objectives. It also facilitates decisions on matters of defence administration, including resources management, and on Joint Service planning and doctrine. The more important committees are described below.

The *Council of Defence* considers and discusses matters relating to the control and administration of the Defence Force referred to it by the Minister for Defence. The Council is chaired by the Minister for Defence and membership comprises the Minister Assisting the Minister for Defence, the Secretary to the Department of Defence, the Chief of the Defence Force and the three Service Chiefs of Staff.

The *Defence Committee* is chaired by the Secretary to the Department of Defence with the Chief of the Defence Force, the three Chiefs of Staff, and the Secretaries to the Departments of the Prime Minister and Cabinet, Treasury and Foreign Affairs as members. The Committee advises the Minister for Defence on defence policy as a whole, the co-ordination of military, strategic, economic, financial and foreign affairs aspects of defence policy, and matters of policy or principle and important questions having a joint service or inter-departmental aspect.

The *Defence Force Development Committee* is chaired by the Secretary to the Department of Defence, with the Chief of the Defence Force and the three Chiefs of Staff as members. It advises the Minister for Defence on force development and the management of resources, including major equipment and facilities acquisitions and formulation of the Five Year Defence Program and annual budget estimates.

The *Chiefs of Staff Committee* is responsible to the Minister for Defence through the Chief of the Defence Force, who is chairman of the committee. Its principal function is to provide advice to the Chief of the Defence Force, including professional single-service advice, to assist him in discharging his responsibility for command of the Defence Force.

### Integration of the former Department of Defence Support

In his statement of 11 December 1984 on changes to the Ministry and Departmental arrangements, the Prime Minister announced that all of the functions of the Department of Defence Support, other than those associated with offsets, were to be transferred into Defence with effect from 13 December 1984. The functions associated with offsets were to be transferred to the Department of Industry Technology and Commerce.

On 16 December 1984 the Minister for Defence announced that the Government factories and dockyards which were part of the former department were to be incorporated into a new Office of Defence Production. Top structure arrangements have been approved for the new organisation and integration of sub-structures and regional elements, involving the amalgamation and rationalisation of services with existing organisations, where this is appropriate, is proceeding.

### Equipment for the Defence Force

An amount of \$1612.8m was spent on equipment of a capital nature in 1984-85. An amount of \$1770.9m is expected to be spent in 1985-86

Expenditure on major capital equipment in 1984-85 continued to be dominated by commitments arising from already approved projects. These include 75 McDonnell-Douglas F/A-18 tactical fighter aircraft; four US built FFG guided missile frigates; ten additional P-3C Orion long range maritime patrol aircraft; the modernisation program for the RAN's three guided missile destroyers; the construction of two FFG class frigates at Williamstown Naval Dockyard and the Destroyer Utility helicopters for the FFGs.

New major capital equipment items approved in the 1985-86 Budget context include light field vehicles for the Army; the second phase of the Defence Integrated Secure Communications Network (DISCON) including the provision of AUSSAT satellite links; new anti-air and anti-ship missiles; the project definition study for the new submarines which are to be constructed in Australia; a helicopter simulator/weapons system trainer; an air traffic control radar for RAAF Base East Sale, Vic; new cryptographic equipment; the second phase of Jindalee over the horizon radar; and utility helicopters.



**EXPENDITURE ON DEFENCE FUNCTION (a)**  
(S'000)

<i>Departmental Category</i>	<i>Actual Expenditure</i>					<i>Estimated Expenditure</i>
	<i>1980-81</i>	<i>1981-82</i>	<i>1982-83</i>	<i>1983-84</i>	<i>1984-85</i>	<i>1985-86</i>
<i>Department of Defence—</i>						
Capital Equipment . . . . .	585,149	533,581	859,120	1,213,411	1,613,943	1,772,074
Capital Facilities . . . . .	124,807	179,035	204,109	246,409	256,793	298,116
Defence Co-operation . . . . .	37,914	39,676	44,209	45,644	45,331	53,157
Manpower . . . . .	1,615,422	2,064,836	2,186,375	2,252,259	2,354,092	2,424,557
Other Running Costs . . . . .	1,059,579	1,156,921	1,318,514	1,405,200	1,536,168	1,664,417
<i>Total</i> . . . . .	<i>3,422,871</i>	<i>3,974,049</i>	<i>4,612,327</i>	<i>5,162,923</i>	<i>5,806,327</i>	<i>6,212,321</i>
<i>Other Departments—</i>						
Capital Facilities . . . . .	8,541	9,180	13,395	16,034	13,229	15,552
Manpower (including Remuneration Tribunal and Defence Forces Retirement and Death Benefits) . . . . .	200,183	246,056	279,714	324,015	366,587	398,780
Other Running Costs . . . . .	27,355	34,750	36,612	37,093	45,933	50,329
<i>Total</i> . . . . .	<i>236,079</i>	<i>289,986</i>	<i>329,721</i>	<i>377,142</i>	<i>425,749</i>	<i>464,661</i>
<b>Total Expenditure on Defence Function</b> . . . . .	<b>3,658,947</b>	<b>4,264,035</b>	<b>4,942,048</b>	<b>5,540,065</b>	<b>6,232,076</b>	<b>6,676,982</b>
<i>Special Provisions—</i>						
Acquisition of Special Purpose Boeing 707 Aircraft . . . . .	196	289	103	30	69	..
Allowance for prospective wage and salary increases . . . . .	..	..	..	..	..	162,000
<b>Total Defence Expenditure.</b> . . . .	<b>3,659,143</b>	<b>4,264,324</b>	<b>4,942,151</b>	<b>5,540,095</b>	<b>6,232,145</b>	<b>6,838,982</b>

(a) On the 13th December 1984 the Government announced that the majority of the functions of the former Department of Defence Support would be incorporated within the Department of Defence as the office of Defence production. Expenditure figures from 1980-81 to 1983-84 have been amended as far as possible to reflect the revised administrative arrangements.

### Defence industry

The Government announced principles on Defence Policy for Australian Industry in June 1984. It noted that Australian industry is extensively involved in programs for the support of the Defence Force which are consistent with strategic priorities and often involve cost premiums above those associated with the Government's general policies. The extent to which penalties for industry involvement in defence procurement are accepted has been determined by making case-by-case judgements of the value of the support and the penalties in cost, capability and availability.

The Government agreed that an effective defence policy for industry cannot be formulated except as an integral part of comprehensive defence policy. Defence funding of local industrial development or of local content in defence procurement should be made in the context of defence policies and priorities.

The Government accorded priority for the use of defence resources for the development of local industrial capability to repair, overhaul and adapt military equipment assessed as fundamental to Australia's defence in those circumstances which the Government accepts as the primary basis for defence planning.

In recent years over 90 per cent of defence spending on equipment repair and overhaul was incurred in Australia. In 1984-85 some 93 per cent of the \$214.5m spent on maintenance and repair of Defence Force equipment was spent in Service maintenance depots, naval and other dockyards, Government factories and private industry throughout Australia. Australian industry was involved in, for example, refitting the Oberon submarines (costing \$30-40m per vessel), modernising the RAN's DE and DDG vessels (project costs of \$171m and \$285m respectively) and refurbishing RAAF Macchi and Mirage aircraft (project costs of \$26m and \$72m respectively).

The Government also accorded priority to funding local supply of the munitions, spares and other consumable stores for which Australia could least rely on overseas supply (including stockpiling and other actions to give greater assurance of supply). Accordingly over 70 per cent of total defence spending on these items is routinely incurred in Australia. In 1984-85 Australian industry accounted for 72.9 per cent of the \$573.2m spent, for example, on replacement gun barrels and tank tracks, commonly used ammunition, and spare parts like turbine blades.

The Government also accorded priority to developing within local industry the range of technologies and supply and support capabilities (including design, development, and manufacture) identified as meeting the longer-term needs of the Defence Force in accord with Government policy and defence guidance as to an acceptable balance of strategic benefits and costs. Defence capital equipment procurement is managed accordingly.

In recent years some 30 per cent of total defence spending of capital equipment is routinely incurred in Australia on selective local design and development and equipment; Australian adaptation of overseas technology to meet particular Australian requirements; local manufacture or construction under licence of overseas designed capital items; and purchasing for military use Australian manufactured commercial products. In 1984-85, total defence expenditure on capital equipment was \$1613.9m, of which \$402.1m was incurred in Australia.

Complete design, development and manufacture of military equipment is undertaken on a selective basis to meet a unique Australian requirement or where there is a particular defence benefit. For example, the Muloaka sonar system was developed specifically for the Australian maritime environment by the Defence Science and Technology Organisation, and it is now being manufactured by Thorn EMI (Ltd) and progressively fitted in the RAN's destroyer escorts. Additional contracts have been let to Thorn EMI (Ltd) and Plessey Australia for two Muloaka systems to be installed in Australian-built guided missile frigates. The Basic Trainer Project is currently under review, but there is a commitment to produce the aircraft within Australia, regardless of whether an Australian or overseas design is selected. Construction of two Australian-designed prototype minehunter catamarans has begun at a new facility especially established by Carrington Slipways Pty Ltd at Newcastle.

Overseas technology is being adapted to particular Australian requirements in, for example, construction of tactical radios for the Army (Project Raven) and the Defence Integrated Secure Communications Network (DISCON) by Plessey Pacific Defence Systems.

Australian defence industry also manufactures overseas designed equipment under license. In November 1984 North Queensland Engineers and Agents Pty Ltd launched the last of 14 British designed Fremantle-Class patrol boats being built for the RAN. The French designed underway replenishment ship being built by Vickers Cockatoo Dockyard was launched in 1984. Production development by the Australian Government Ordnance Factories of the UK designed 105mm light gun is now well advanced. Construction of the first of two US designed Perry Class guided missile frigates (FFG7s) to be built in Australia commenced in March 1985 at Williamstown Naval Dockyard.

Australian industry manufactures numerous commercial items suitable for military use. Mack Trucks (Australia) Pty Ltd and Mercedes-Benz (Australia) are constructing 940 eight tonne trucks and 1,295 four tonne trucks respectively for the Army.

In 1984-85 payments for relatively few, but very complex and necessarily imported capital items (for example F/A-18 fighters and Orion long range maritime patrol aircraft) absorbed 62 per cent of defence capital equipment spending. At the same time these overseas purchases generated opportunities for Australian industry. The F/A-18 project, for example, designates a carefully chosen range of assembly and manufacturing tasks to be undertaken in Australia to establish the requisite indigenous support capacity. In addition, a broad range of Australian industry will compete for offset work negotiated in conjunction with the contract.

## INDUSTRY RELATED DEFENCE EXPENDITURE IN AUSTRALIA

	1980-81		1981-82		1982-83		1983-84(a)		1984-85	
	\$m	%	\$m	%	\$m	%	\$m	%	\$m	%
Capital Equipment—										
Total	585.1		533.6		859.1		1,213.4		1,613.9	
Local	204.2	34.9	307.7	57.7	334.2	38.9	364.5	30.0	402.1	24.9
Replacement Equipment and Stores—										
Total	442.7		461.6		517.8		534.0		573.2	
Local	314.3	71.0	328.8	71.2	356.6	68.9	385.9	72.5	417.9	72.9
Equipment Repair and Overhaul—										
Total	134.9		159.9		183.5		188.8		214.5	
Local	126.3	93.6	146.3	91.5	170.4	92.9	178.5	94.5	199.5	93.0
Total Equipment Related Expenditure—										
Total	1,162.7		1,155.1		1,560.4		1,936.2		2,401.5	
Local	644.7	55.4	782.7	67.8	861.2	55.2	928.9	48.0	1,019.5	42.5

(a) The 1983-84 figures reflect classification changes included in the 1984-85 Budget Paper No. 1.

### Defence Logistics Organisation

In its final report in 1982, the Defence Review Committee (chaired by Mr Utz) agreed in principle with a Department of Defence proposal to restructure the Supply and Support Organisation within Defence. The need to co-ordinate the functions of supply, technical services and facilities according to logistic concepts resulted in the creation in December 1984 of the Defence Logistics Organisation (DLO) to replace the Supply and Support Organisation.

The main functional groupings within the DLO are:

- *Supply Division*—supply policy, movement, transport and cataloguing;
- *Technical Services and Logistic Development Division*—resource issues, technical services, standardisation, quality assurance and logistic systems development;
- *Defence Facilities Division*—the infrastructure of military bases and establishments.

Defence logistic activities perform a vital and complex role in maintaining the readiness and sustainability of the Defence Force and comprise:

- the management of all items of supply including the determination of requirements and procurement (other than capital items), their cataloguing, warehousing, accounting, distribution and disposal, and the management of the systems (including computer systems) upon which the Defence Force is dependent;
- the replacement, repair and maintenance of equipment in service;
- the provision of quality assurance for new equipment and for repair and overhaul;
- the provision of transport services;
- the contribution of supply and engineering expertise to the determination and selection of capital equipment requirements;
- the development of policy and guidelines promoting an integrated logistic approach to Defence Force supply and technical services matters;
- the development of facilities infrastructure to support the operation of the Defence Force.

Defence logistics is thus one of the more important activities concerned with the effectiveness of the Defence Force.

In supporting the Defence Force, logistic development must take account of Australia's geographical and population characteristics, which also influence its strategic concepts and industrial development. While promotion of Australian industry activity in the support function is progressed through the medium of programs managed elsewhere within the Department, logistic activities include measures to establish support capabilities in Australian industry.

There is, however, a continuing need to depend on overseas sources of supply for major items of defence equipment. International arrangements for the support of equipment are thus an important aspect of Defence logistics:

- Under the auspices of the ANZUS Treaty, a bilateral arrangement for reciprocal logistic support is formalised in the Memorandum of Understanding (MOU) on Logistic

Support between Australia and the United States. The MOU, originally signed in 1980, was renewed in 1985 for a further 5 year period and now incorporates an annex on procedures to raise the level of priority for Australian logistic needs in the US system.

- Government-to-Government assurances are sought for support through the full life of type of equipment purchased from suppliers in other countries. Such assurances have been obtained from Sweden, France and the Federal Republic of Germany and similar assurances are being sought from the United Kingdom, Italy, Belgium, Austria, the Netherlands and Norway.
- Reciprocal government agreements for quality assurance have been signed with the United States, the United Kingdom, France, Belgium the Netherlands and the Federal Republic of Germany. Negotiations are continuing with Sweden and Italy.
- Bilateral arrangements covering the support for material provided under the Defence Co-operation Program and other common inventory items have been completed with Papua New Guinea and are being developed with Vanuatu and Fiji.
- Ongoing arrangements for the reciprocal provision of spare parts and repair services for the forces of New Zealand and Australia are a routine feature of logistics co-operation between the two countries. These are expressed in the MOU concerning Closer Defence Logistic Co-operation which was agreed in June 1983.

The additional costs associated with more complex technology in weapons systems continue to put pressure on logistic resources, particularly when combined with the present need to make a greater percentage of Defence expenditure available for new major equipment purchases. Attention is therefore turning to more rigorous justification of needs, increased rationalisation and improved efficiency without detriment to the effectiveness of the logistic support available to the Defence Force.

Movement and transport are vital ingredients to logistic support, providing scope for rationalisation amongst the Services of the Defence Force and amongst government departments. The commercial transport industry is included in current transport operating and contingency planning.

In recognition of the importance of management systems to support logistic arrangements as well as operational systems, a major redevelopment of computer based supply systems supporting Navy, Army and Air Force commenced in 1984. The aim of redevelopment is to provide systems which will support management and operational needs beyond the year 2000. As far as possible, common systems will be developed and introduced concurrently with a computer replacement program. Redevelopment in conjunction with computer replacement is expected to provide systems able to provide the fast response, growth capacity, compatibility and interoperability necessary for a modern defence force. Implementation is planned to commence in 1990.

### *Land*

Defence is by far the largest Commonwealth user of land in Australia. The extent, visibility and significance of Defence activities generate a substantial level of public interest in the acquisition or use of land for defence purposes.

The management of programs to provide for Defence's land needs therefore must be conducted with rigour and sensitivity to ensure that the wider social value of land is balanced against its value to Australia's national security.

### *Capital Facilities*

During 1984-85 total expenditure on capital facilities was \$257 million. Expenditure in 1985-86 is estimated to be \$298 million.

Emphasis throughout 1984-85 continued to be placed on the provision of facilities for planned new equipment and the continued upgrading and modernisation of existing facilities. Work continued on the construction of facilities for the F/A-18 at Williamtown and work commenced at Tindal. Redevelopment of RMC Duntroon (\$8.0m) to cater for its changing role due to the opening of the Australian Defence Force Academy in January 1986 was also commenced. Other significant proposals to commence during 1985-86 included the following: Medical and Dental facilities at HMAS Nirimba (\$2.0m), training facilities at Crib Point, Victoria (\$1.0m), workshop facilities at Bandiana, Victoria (\$2.0m) and the upgrading of the sewerage works at Moorebank (\$1.0m).

Significant land acquisitions were commenced at Amberley, Queensland (\$1.4m) to provide safety buffer zones and at Tindal, NT (\$1.8m) to acquire land for housing and other operational requirements.

\$30.441 million was spent on the purchase or construction of houses during 1984-85. Some 330 houses were built and the construction or purchase of a further 392 was authorised. \$8.003 million was spent on improving existing older houses.

### Defence manpower

The following table indicates the range of activities and occupations in which defence military and civilian manpower are involved.

#### FUNCTIONAL DISTRIBUTION OF DEFENCE MANPOWER AS AT 30 JUNE 1985 (a)

Function	Service	Civilian	Total
<i>Under the Secretary Department of Defence:</i>			
Manpower and Financial Services . . . . .	237	2077	2314
Strategic Policy and Force Development . . . . .	306	98	404
Capital Procurement . . . . .	187	27	214
Defence Logistics . . . . .	131	466	597
Defence Science and Technology . . . . .	52	4322	4374
Policy Co-ordination/Computing Services/Defence Purchasing . . . . .	82	144	226
Regional Offices . . . . .	5	1340	1345
<i>Office of Defence Production</i>			
Shipbuilding . . . . .	46	5380	5426
Aerospace . . . . .	3	2361	2364
Munitions . . . . .	—	6060	6060
Administration . . . . .	—	1181	1181
<i>Under the Chief of Defence Force</i>			
Navy . . . . .	15677	4927	20604
Army . . . . .	31846	6364	38210
Air Force . . . . .	22192	2659	24851
Headquarters ADF . . . . .	267	82	349
<i>Outrider Organisations of the Department of Defence</i>	351	783	1134
<b>Total</b>	<b>71382</b>	<b>38271</b>	<b>109653</b>

(a) Figures cannot be reconciled with those in Year Books published prior to 1984 owing to changes within classifications. Civilian figures include only full-time operatives and exclude locally engaged civilians employed in support of Air Force deployment, overseas persons on extended leave and part-time staff.

#### PERSONNEL STRENGTHS OF THE PERMANENT DEFENCE FORCE AS AT 30 JUNE

	Navy	Army	Air Force	Total
1980 . . . . .	16,961	32,321	22,249	71,531
1981 . . . . .	17,298	32,898	22,322	72,518
1982 . . . . .	17,598	32,876	22,711	73,185
1983 . . . . .	17,198	33,072	22,512	72,782
1984 . . . . .	16,692	32,278	22,672	71,642
1985 . . . . .	16,059	32,460	22,863	71,382
1986 (approved targets)	15,536	32,000	22,797	70,333

#### COMPOSITION OF PERMANENT DEFENCE FORCE (a) AS AT 13 JUNE 1985

	Navy	Army	Air Force	Total
<b>Male—</b>				
Officers . . . . .	2,074	4,203	3,399	9,676
Other Ranks . . . . .	12,037	25,292	16,597	53,926
Cadets . . . . .	321	420	476	1,217
Apprentices . . . . .	542	547	513	1,602
<i>Sub-Total</i> . . . . .	<i>14,974</i>	<i>30,462</i>	<i>20,985</i>	<i>66,421</i>
<b>Females (b)</b>				
Officers . . . . .	129	357	264	750
Other Ranks (c) . . . . .	956	1,641	1,614	4,211
<i>Sub-Total</i> . . . . .	<i>1,085</i>	<i>1,998</i>	<i>1,878</i>	<i>4,961</i>
<b>Total Strength</b>	<b>16,059</b>	<b>32,460</b>	<b>22,863</b>	<b>71,382</b>

(a) Includes Reserve personnel on full-time duty. (b) Excludes female personnel on maternity leave. (c) Includes female officer cadets and female apprentices.

### Reserve Forces

Reserves comprise trained and partly trained volunteers who are available to participate in the defence of Australia and its interest in times of war or defence emergency. Royal Australian Navy and Royal Australian Air Force Reserves can be used to supplement and increase the rate of effort of the Permanent Forces. The Army Reserve consists mainly of formed units and sub units, which with the Regular Army, provide the basis for expansion of the Army.

RESERVE COMPONENTS WITH TRAINING OBLIGATIONS AS AT 30 JUNE

	<i>Navy</i>	<i>Army</i>	<i>Air Force</i>	<i>Total</i>
1980 . . . . .	1,039	23,986	502	25,527
1981 . . . . .	1,021	31,125	591	32,737
1982 . . . . .	1,094	31,706	873	33,673
1983 . . . . .	1,204	33,227	1,178	35,609
1984 . . . . .	1,220	29,021	1,608	31,849
1985 . . . . .	1,135	23,846	1,353	26,334

### International Defence Relations

The principal objectives of the Government's regional defence policy are:

- to promote regional stability;
- to register Australia's continuing interest in issues that affect regional security;
- to encourage broader regional consideration and planning on security—related matters; and
- to encourage and assist the development of regional defence self-reliance, in keeping with the defence and security capacities of our regional neighbours.

These objectives are met in five major ways:

- Ministerial and other high-level strategic and defence consultations with our main defence partners;
- joint exercises;
- exchanges of visits by the Service Chiefs and other Service Officers;
- port visits by HMA Ships
- Defence Representation Abroad—Defence Advisers or Attaches are stationed permanently at Australian diplomatic missions in Britain, China, Fiji, France, The Federal Republic of Germany, India, Indonesia, Japan, the Republic of Korea, Malaysia, New Zealand, Pakistan, Thailand and the United States of America, and are accredited to Burma, Canada, Iran, Nepal, Switzerland and to the South Pacific states of Kiribati, the Solomon Islands, Tonga, Tuvalu and Western Samoa;

### Defence cooperation

In support of this policy, the Defence Cooperation Program (DCP) complements other defence cooperative arrangements and activities with regional countries. DCP aims are:

- to exchange and share knowledge, information and experience in the development of military organisations, capabilities and skills;
- to provide opportunities for the Australian Defence force and the defence and defence related forces of partner countries to enhance their understanding of each other's military environment and organization and methods of operation, and to operate together;
- to provide the Australian Defence force with operational experience in the regional environment;
- to demonstrate the competence of the Australian Defence force to manage and operate modern military equipment; and
- to develop an acceptance of Australia as a regional centre for, and source of, defence technological and industrial competence.

### *Papua New Guinea (PNG)*

The DCP with PNG assists with the development of an effective PNG Defence Force that is capable of supporting national sovereignty and the task of nation building. The program comprises ADF personnel assisting the PNGDF, training in Australia, equipment-based joint projects, and combined exercises. Total DCP expenditure for PNG in 1984–85 was \$16.031m.

*Indonesia*

In Indonesia, the DCP aims to enhance the working relationship between the ADF and the Indonesian Armed Forces and defence organisation. The Program focuses on personnel exchanges, training in Australia and equipment-based joint projects which facilitate the transfer of defence technological capabilities. DCP expenditure for Indonesia in 1984-85 totalled \$9.953m.

*South Pacific*

Programs with these countries promote acceptance of Australian defence activities as a natural component of the Australian presence in the region. The program concentrates on the expansion of areas of the countries' national infrastructure which have defence and security applications, through:

- equipment based projects, of which the South Pacific Patrol Boat is the most prominent;
- training;
- the provision of specialist ADF personnel.

Total expenditure for the South Pacific States totalled \$5.860m in 1984-85.

*Malaysia*

The DCP helps to develop Malaysia's defence self-reliance. The program focuses on training in Australia and ADF consultancy in Malaysia in the establishment of a modern conventional defence force. DCP assistance to Malaysia totalled \$5.613m in 1984-85.

*Singapore*

In Singapore, the main thrust of the Program is the establishment of a constructive working relationship with the Singapore Armed Forces and defence organisation through increased contact between Singapore Armed Forces and ADF personnel, and training in Australia. Total DCP expenditure for Singapore in 1984-85 was \$1.322m.

*Thailand*

The Program demonstrates Australia's support for Thailand's national efforts to maintain stability in its immediate region. The program focuses on equipment-based projects, study visits and training in Australia. DCP assistance to Thailand in 1984-85 totalled \$4.302m.

*Philippines*

The Defence Cooperation Program is directed at maintaining contact with the Philippines defence authorities. It comprises an equipment-based project in-country, a mobile medical facility, and some training in Australia. DCP expenditure for the Philippines in 1984-85 was \$1.356m.

*Other Countries*

The DCP helps to maintain defence contacts with other countries in Asia and the Indian Ocean region in support of Australia's diplomatic and political interests, primarily through training in Australia and occasional study visits. DCP assistance to other countries totalled \$.497m in 1984-85.

**Equipment, facilities and associated expenditure for defence cooperation training in Australia**

Australia aims for continued modest expansion of its training support to Defence Cooperation Program participating countries. This is achieved through acquisition of assets designed to meet the military training needs of the regional states. Under the DCP \$.398m was spent enhancing Australian training facilities in 1984-85.

**Defence force activities overseas**

The main areas where Australian Defence Force elements have been deployed during the year were Malaysia/Singapore, Papua New Guinea, the Middle East and the Indian Ocean. Units also visited the United Kingdom, Indonesia, the Philippines, the United States, Canada, New Zealand and the South-West Pacific.

Australian Defence Force elements in the Malaysia/Singapore area include:

*Navy*—Ships of the RAN on exercises and goodwill visits.

*Army*—An Australian infantry company is maintained at Butterworth on the basis of three month detachments from Australia, in a training role.

*Air Force*—The Government has decided that the Mirages will be replaced from mid 1988 by periodic deployments of F/A-18s as these aircraft are phased into service with the RAAF.

The Defence Force continued to contribute to United Nations peacekeeping operations with Australian Army observers in Jordan, Egypt, Israel, Syria and Lebanon. An Australian Army officer has been seconded to the UN HQ in New York for liaison duties.

Since mid-January 1981 RAN ships have been deployed for patrol duties in the Indian Ocean littoral states.

Under the Defence Co-operation Program elements of the Defence Force have continued to conduct survey and civil engineering operations in the neighbouring countries. In 1984-85 survey operations were undertaken in Vanuatu and Kiribati.

An Army engineering unit is permanently located in the Southern Highlands Province of PNG and engineer personnel have been deployed to Fiji, Solomon Islands, Vanuatu, Tonga and Western Samoa.

## THE DEFENCE FORCE

### Royal Australian Navy

The RAN maintains and exercises a modern, well-equipped and highly-trained maritime force. The structure of this force is based primarily on the provision at sea of a balanced force group, consisting of surface warships, naval aviation and submarines.

#### Higher organisation

The Chief of Naval Staff has command of the RAN, subject to the command of the Defence Force by the Chief of the Defence Force. Principal staff officers to the Chief of Naval Staff are the Deputy Chief of Naval Staff, the Chief of Naval Operational Requirements and Plans, the Chief of Naval Personnel, the Chief of Naval Engineering, the Chief of Naval Materiel and the Director General of Supply Navy. Other senior officers of the RAN include the Flag Officer Naval Support Command and the Flag Officer Commanding HM Australian Fleet.

#### Ships of the Royal Australian Navy

The Fleet, September 1985: *Stalwart*—destroyer tender; *Supply*—oiler (to be paid off December 1985, and replaced by new ship *Success* early in 1986); *Tobruk*—amphibious heavy lift ship; *Perth*, *Hobart*, *Brisbane*—guided missile destroyers; *Adelaide*, *Canberra*, *Sydney*, *Darwin*—guided missile frigates; *Yarra* (to be paid off and disposed of, November 1985); *Parramatta*, *Stuart*, *Swan*, *Torrens*, (*Derwent* decommissioned—undergoing modernisation at Williamstown)—destroyer escorts; *Vampire*—destroyer training ship; *Jervis Bay*—training ship; *Curlew*—coastal minehunter; *Moresby*, *Flinders*—surveying ships; *Cook*—oceanographic research ship; *Otway*, *Onslow*, *Ovens*, *Otama*, *Oxley*, *Orion*—submarines; *Fremantle*, *Launceston*, *Townsville*, *Warrnambool*, *Ipswich*, *Cessnock*, *Whyalla*, *Wollongong*, *Bendigo*, *Gawler*, *Geraldton*, *Dubbo*, *Geelong*, *Gladstone*, *Bunbury*—patrol boats; *Brunei*, *Betano* (converted for hydrographic operations)—heavy landing craft. Three heavy landing craft—*Tarakan*, *Wewak* and *Balikpapan* have been paid off into Reserve but can be brought to operational readiness within 21 days. Patrol boats *Adroit*, *Ardent*, *Advance*, *Aware*, *Bayonet*, and heavy landing craft *Labuan* are manned by RAN Reserve personnel.

#### Fleet Air Arm

On 30 June 1984 the A4 Skyhawks and S2 Trackers ceased operations in accordance with Government decisions. The Skyhawks were purchased by New Zealand while the Trackers have been purchased by American companies. The two squadrons that operated these aircraft, VC724 and VC851, were disbanded on 31 August 1984.

The RAN currently operates five different types of helicopters and HS748 electronic warfare training aircraft from HMAS *Albatross*, the Naval Air Station at Nowra in N.S.W.

HS817 operates the Sea King MK50 helicopters in the anti-submarine role. HU816 operates Wessex helicopters in the utility role. HC723 operates UH1B in the utility and SAR roles, Bell 206 from HMAS *Moresby* survey support and AS305B Squirrels for interim FFG training tasks. The squadron also operates the HS748 aircraft.

The RAN operates Jindivik pilotless target aircraft from the Jervis Bay Range facility in N.S.W. and in August 1984 the new and improved 700 series Jindivik aircraft were introduced into service.



### Equipment for the Royal Australian Navy

Significant new equipment received by the RAN in 1984-85 include:

- two Fremantle Class patrol boats (HMAS *Gladstone* and HMAS *Bunbury*)
- four of six Squirrel helicopters.

Deliveries expected during 1985-86 include:

- HMAS *Otama* (submarine), from modernisation
- HMAS *Derwent* (destroyer escort), from modernisation
- HMAS *Success* (oiler), commissioning March 1986 from building at Vickers Cockatoo Dockyard in Sydney
- two Squirrel helicopters.

Contracts and tenders negotiated during 1984-85 include:

- contract for supply of 8 Seahawk helicopters in 1988
- funded study for the provision of new submarines by HDW/IKL of West Germany and Kockums of Sweden.

### Training and entry

*RAN Staff College.* The RAN Staff College located at HMAS *Penguin*, Balmoral, N.S.W., prepares RAN officers of Lieutenant Commander and Lieutenant rank for command and staff appointments. Two courses of 22 weeks duration are run annually, each course comprising 28 students, typically 20 Naval Officers, one officer each from the Army, RAAF, USN and RNZN two Public Service Board officers, and two Defence Co-operation Program students.

*Officer Entry.* The Royal Australian Naval College at Jervis Bay is the training centre for officers in the RAN. Applicants for permanent commissions (presently male only) must be under 20 years of age on 1 January of the year of entry and must matriculate to a university in an Australian capital city. Officer appointees specialise in Seamen, Engineering, Supply and Secretariat, or Instructor Branch. Appointees either complete a full-time degree course in Engineering, Science, Surveying or Arts at the University of New South Wales, or complete a Diploma of Applied Science at the Royal Australian Naval College. Applicants for degree studies must meet the entry requirements of the appropriate faculty of the University of New South Wales. Male and female applicants for short service commissions must be under 24 years of age on 1 January of the year of entry and have either matriculated to a degree course at an Australian university, College of Advanced Education, or Institute of Technical and Further Education, or achieve four passes at Year 12. Entry is also available to professionally qualified persons such as doctors, teachers, engineers and lawyers.

*Sailor Entry.* There are several available entry schemes, all of which are open to both males and females, depending upon an individual's age, educational standard, final employment and interests. New entry training is carried out at the following establishments:

- HMAS *Nirimba* at Quaker's Hill, New South Wales is the primary establishment for all RAN trade training which includes courses for apprentices aged between fifteen and eighteen and direct entry tradesmen.
- HMAS *Cerberus* at Westernport, Victoria is the primary training establishment for all general entry, non-apprentice recruits aged between seventeen and twenty-six. Recruits receive common basic training before progressing to category training courses.
- Advanced category training is additionally undertaken at various schools at HMAS *Penguin* and HMAS *Watson* in Sydney and the Naval Air Station *Nowra*, N.S.W. A number of specialist courses are conducted in the United States and United Kingdom.

### Ship construction and repairs

There are two naval dockyards, one at Garden Island, Sydney and one at Williamstown, near Melbourne. A third yard at Cockatoo Island in Sydney Harbour is operated by Vickers Cockatoo Dockyard Pty Ltd (VCD) under agreement with the Australian Government. This company carries out considerable naval refitting work, particularly of submarines. In August 1979 the company was awarded a contract to construct a new replenishment ship for the RAN the keel of which was laid in August 1980.

Current construction projects include modernisation of the last Destroyer Escort being undertaken by Williamstown Dockyard. An order was placed on Williamstown Naval Dockyard for construction of 2 FFG7 class Guided Missile Frigates. Construction of two prototype minehunter catamarans has begun at a new facility established by Carrington Slipways Pty Ltd, Newcastle.

HMAS *Success* (AOR-01) was launched in March 1984 and work continues on the fitting out of the vessel at Vickers Cockatoo Dockyard. She is due to commission in the RAN early in 1986.

## Australian Army

The Australian Army maintains a potential ability and readiness to conduct operations on land for the defence of Australia and, in co-operation with the other arms of the Australian Defence Force, shares a responsibility to deter aggression, to ensure the nation's security and to preserve its national interests.

### Higher Organisation

Command of the Army is the responsibility of the Chief of the General Staff, subject to the overall command of the Defence Force by the Chief of the Defence Force. He has for his principal staff officers the Deputy Chief of the General Staff, the Chief of Operations, the Chief of Personnel, the Chief of Logistics, the Chief of Materiel and the chief of the Army Reserve.

The Army is organised into three commands as follows:

- *Field Force Command* which commands all field force units of the Australian Army, both Regular and Army Reserve.
- *Logistic Command* which commands the principal logistic elements of the Army.
- *Training Command* which is responsible for all individual training and commands all Army training establishments and schools with the exception of the Royal Military College, Duntroon (which is under the command of the Chief of the General Staff).

Military Districts as listed below provide administrative support for the three commands, and, in certain cases act as intermediate headquarters for them:

- *1st Military District*—the State of Queensland.
- *2nd Military District*—the State of New South Wales, less those parts included in 3rd and 4th Military Districts.
- *3rd Military District*—the State of Victoria and part of southern New South Wales.
- *4th Military District*—the State of South Australia plus a portion of south-western New South Wales.
- *5th Military District*—the State of Western Australia, less the Kimberley Local Government area.
- *6th Military District*—the State of Tasmania.
- *7th Military District*—the Northern Territory plus the Kimberley Local Government area of Western Australia.

The military district, headquarters also handle those matters in which both Commonwealth and State Governments are involved.

### Training

*Officer Training.* The Army conducts pre-commissioning training of its officers at:

- a. Royal Military College. Located at Duntroon in the Australian Capital Territory, this college provides military pre-commissioning training for all officers of the Regular Army except Specialist Service Officers.
- b. Officer Cadet Training Units. These units are located in each Military District and provide pre-commissioning training for the majority of officers for the Army Reserve.
- c. University Regiments. These units identify and train tertiary students as officers for service in the Army Reserve.
- d. Specialist Service Officer Course. This course is conducted at Land Warfare Centre, Canungra, Queensland, and provides an introduction to the Army for newly commissioned Specialist Service Officers in professions such as Law, Medicine and Dentistry.

*Command and Staff College.* Located at Queenscliff in Victoria, the college provides training for selected Australian and overseas officers, to prepare them for command and staff appointments in the rank of lieutenant colonel.

*Other Rank Training.* Initial training for other ranks is provided as follows:

- a. 1st Recruiting Training Battalion, Kapooka, New South Wales. This unit is the major training unit for all enlistees into the Regular Army.
- b. Army Apprentice School, Bonegilla, Victoria. This school provides initial trade and military training for apprentice enlistees.
- c. Army Reserve recruits attend initial training at courses conducted by Training Groups located in most Military Districts.

*Land Warfare Centre.* The Land Warfare Centre at Canungra, Queensland conducts courses for both officers and other ranks as follows:

- a. promotion subjects,
- b. tactics and administration,

- c. individual battle skills, and
- d. sub-unit operations.

*Other Schools.* Army schools have been established to train officers and other ranks in up to date techniques of their own arm or service. Courses conducted include training, promotion courses and instructor development courses for members of both the Regular Army and the Army Reserve.

#### **Equipment for the Army**

Significant new equipment items received by the Army in 1984-85 included 209 eight tonne and 259 four tonne trucks, 46 120LPS compressors, 871 mine detectors, 8 earth augers, 27 heavy tracked tractors, 20 heavy duty scrapers and 15 155mm M198 Howitzers. Deliveries expected in 1985-86 include 676 general support machine guns, 175 eight tonne and 259 four tonne trucks, 27 light wheeled tractors, 28 120 LPS compressors and 18 sets of 20,000 LPH and 33 sets of 7500LPH water purification equipment.



Gunners from the 8/12 Medium Regiment lay down a barrage during a mock battle.

*Department of Defence*

## Royal Australian Air Force

The function of the Royal Australian Air Force is the conduct of operations in the air for the defence of Australia and Australian interests.

### Higher Organisation

The Chief of the Air Staff (CAS) is responsible to the Minister for Defence through the Chief of Defence Force (CDF) for command of the RAAF. Staff to assist the CAS in discharging his responsibilities and to provide higher command, policy and broad planning direction of RAAF activities is provided by Department of Defence (Air Force Office) (DEFAIR). The CAS is directly assisted in his decisions by the Chief of the Air Staff Advisory Committee (CASAC). The CASAC includes the Deputy Chief of the Air Staff, Chief of Air Force Operations and Plans, Chief of Air Force Materiel, Chief of Air Force Personnel, Chief of Air Force Technical Services, the Air Officers Commanding Operational and Support Commands, and the Director General Supply—Air Force. However, as this Committee has no executive authority, the CAS is not bound to accept its advice in reaching decisions.

### RAAF Commands

The RAAF is organised into two functional commands, *Operational Command* and *Support Command*. The Command headquarters provides the intermediate level command and staff structure through which the directives and policies of the CAS are placed in effect. (Other RAAF elements not assigned to these Commands are responsible direct to DEFAIR.) The general function of *Operational Command* is the provision of combat-ready forces for employment in assigned roles and the conduct of air operations within Australia and overseas from within the resources allocated. *Support Command* is responsible for the provision of support, including basic training of personnel, logistics and the supply and maintenance of RAAF equipment.

Units of either Command, but primarily *Operational Command*, may be assigned by the CAS to make up part of other formally established forces, such as a joint force, a tactical air support force (TASF), a peacekeeping force or any other grouping necessary to meet a particular operational task or contingency.

The operational component is made up of the strike/reconnaissance, tactical fighter, maritime and air transport forces and is supported operationally by the ground defence force and an operational support unit. The support component comprises a training element, an administrative element, a logistics element and units with other miscellaneous support responsibilities.

### Aircraft

The RAAF's strike/reconnaissance force is equipped with F-111A/C and RF-111C aircraft. The tactical fighter force, currently equipped with Mirage 1110/D began re-equipping with F/A-18 aircraft in April 1985. RAAF maritime squadrons presently operate Orion P-3B and P-3C aircraft. Transport aircraft currently in use by the RAAF are Hercules C-130E and C-130H, CC08 Caribou, Mystere 20, HS-748, Boeing 707, and BAC-111 aircraft. In addition, the air transport force operates the UH-1H Iroquois and AS-350 Squirrel helicopters and the CH-47C Chinook medium lift helicopter. Aircraft used by the support component for basic aircrew training are the CT-4A Airtrainer, Macchi MB-326H and HS-748.

### Training

*Australian Defence Force Academy (ADFA)*. From 1986, ADFA will replace the RAAF Academy, Engineer Cadet Squadron, and Supply Cadet Scheme as the primary source of tertiary-qualified entrants to the General Duties, Engineer and Supply Branches of the RAAF Officer Corps. ADFA will be located in Canberra and will contain a College of the University of New South Wales.

*Basic Aircrew Training*. Flying training for RAAF pilots is conducted at Point Cook, Victoria and Pearce, Western Australia. RAAF navigators are trained at East Sale, Victoria and airman aircrew (flight engineers, loadmasters and air electronics analysts) undergo basic training at Edinburgh, South Australia. The RAAF also provides pilot and observer training for the RAN and pilot training for the Army and Papua New Guinea Defence Force.

*Aircrew Operational Conversion*. Conversion training to Mirage fighter aircraft and Orion Maritime aircraft is conducted by the respective conversion training squadrons. Conversions to other operational aircraft are conducted within the operational squadrons.

**Officer Training.** With the exception of those officers commissioned from ADFA, all officers entering directly (with or without tertiary qualifications), commissioned airmen and airwomen, aircrew (pilot and navigator), engineering and equipment cadets and undergraduate students undergo the Junior Officer Initial Course (JOIC) at the Officers' Training School, Point Cook, Victoria. Following graduation from the JOIC all graduates, with the exception of aircrew (pilot and navigator), immediately undergo the Joint Officer Executive Course at Officers' Training School, Point Cook.

**Staff College.** The RAAF Staff College located at Fairbairn, Australian Capital Territory, provides two residential staff courses. The Basic Staff Course of six weeks duration provides Command and staff training to officers of the rank of Flight Lieutenant. The Advanced Staff College Course of forty-three weeks duration provides staff training and higher service education to selected officers normally of the rank of Squadron Leader. This course is designed to broaden the students' professional background and to prepare them for Command and staff appointments of greater responsibility. A one year correspondence course covering military studies, international affairs and management is a compulsory prerequisite for entry to the advanced course.

**Ground Training.** The major ground training schools are the School of Radio at Laverton, Victoria and the School of Technical Training at Wagga, New South Wales. Both schools provide trade and technologist apprentice and adult trade training for technical personnel. They also provide post-graduate type training and specialist familiarisation courses on aircraft and telecommunications systems. Non-technical courses conducted at Wagga include catering, clerical, supervision and management and instructional technique.

#### **Equipment for the Royal Australian Air Force**

Forecasts regarding major capital equipment acquisitions are as follows:

- Deliveries of ten additional P3C aircraft to replace existing P3B aircraft commenced in October 1984. Four have been delivered to date with delivery of the last expected in March 1986.
- The first two F/A-18 aircraft have been delivered from the USA. The remaining 73 Hornets are being assembled in Australia. The first Australian assembled Hornet was delivered in April 1985 and a further ten will be delivered during 1985-86.

New major capital equipment decisions approved by the Government during (1984-85) include:

- New Electronic Support Measures for P3C.
- Tindal Airfield Surveillance Radar.

Deliveries expected during 1985-86 include:

- 4 TF/A-18 (dual seat).
- 6 F/A-18 (single seat).
- First of two F/A-18 Operational Flight Trainers.
- First Australian F111 fitted with Pavetack.

### **Defence Science and Technology Organisation**

The Department's defence science and technology establishments, collectively known as the Defence Science and Technology Organisation (DSTO), form the second largest research organisation in Australia with some 1,000 professional scientists and engineers in its total staff of about 4,400.

DSTO was established as a unified organisation in 1975 when the laboratories formerly in the Department of Supply were brought into the Department of Defence and under the direct control of the Chief Defence Scientist.

DSTO has a central office and one establishment in Canberra, representatives in London and Washington, and five major and three small establishments in five States. The Chief Defence Scientist, is supported in the Central Office by an Executive, and policy and management staff. Scientific advisers are attached to Service headquarters in Canberra and some field headquarters.

The objective of DSTO is to help the Australian Defence Force take best advantage of modern technology. Major activities are: scientific input to Defence policy formulation; solution of Defence Force problems particularly where high technology or special features of Australian physical or military environment are involved; modification and extension of life of military equipment; development of indigenous equipment; evaluation of military equipment and procedures by trials, exercise analysis or operational research; support to defence

industry; and international co-operation in defence research and development (R & D). The DSTO also conducts mission-oriented research and enhances or maintains a technology base in key areas such as surveillance, aeronautics, weapons guidance and other electronic systems and countermeasures, explosives and propulsion.

There is considerable interaction between DSTO and its principal customers, the Defence Force and defence industry. Many companies benefit from close association with this R & D effort, some having facilities adjoining or co-located with the Defence Research Centre, Salisbury (DRCS).

Despite the laboratories' strong alignment with defence, their unique skills and facilities are available for non-defence tasks when priorities permit. Functions of the laboratories are briefly described below.

*Aeronautical Research Laboratories, Fishermans Bend, Vic.*—Provides research support primarily to the defence force and defence industry in fields including aerodynamics, aircraft materials, structural integrity and efficiency of aircraft, analysis and integration of systems, and on air-breathing propulsion systems and engine airframe integration and performance. It also assists civil aviation in some of these fields.

*Advanced Engineering Laboratory, DRCS, S.A.*—Engages in engineering feasibility studies and the development, design and manufacture of prototype systems and equipment in the mechanical and electronic engineering fields. It also provides engineering support to the Services and assistance to defence-related industry and maintains an advanced engineering technology base.

*Central Studies Establishment, Canberra, A.C.T.*—Carries out analytical studies on force structure, defence planning, equipment proposals, weapons systems, logistics and manpower.

*Electronics Research Laboratory, DRCS, S.A.*—Is concerned primarily with R & D in radar, radio, electronics, infra-red physics, optics, electro-optics, electronic warfare and surveillance.

*Materials Research Laboratories, Maribyrnong, Vic.*—Provides research and development support to the Defence Force and defence industry in fields including organic and inorganic materials, metallurgy, explosives and ordnance, electromagnetic propulsion and terminal ballistics, high energy lasers and camouflage.

*Armed Forces Food Science Establishment, Scottsdale, Tas.*—Determines the energy and nutrient requirements of servicemen under all conditions in which they may be expected to operate and translates these needs into ration scales for static mess feeding and ration packs for combat purposes. AFFSE is part of the Materials Research Laboratories (MRL).

*Joint Tropical Trials and Research Establishment, Innisfail, Qld*—Performs investigations and research on the effects of tropical environments on materials, equipment and electromagnetic wave propagation; and on mechanisms of degradation, ways of measuring degradation and the classification of tropical environments. Sponsored jointly by Australia and United Kingdom, JTTR is part of MRL.

*Weapons Systems Research Laboratory, DRCS, S.A.*—Responsible for R & D related to aeroballistic aspects of weapons and weapon systems, rocket and gun propulsion systems, combat data and display systems, guidance and control systems for weapons, underwater detection systems and the integration of systems.

*RAN Research Laboratory, Pyrmont, N.S.W.*—Conducts operations research studies on maritime warfare, analyses maritime exercises, and undertakes research on underwater acoustics, oceanography, sonar and mine warfare. RANRL is part of Weapons Systems Research Laboratory.

*Defence Research Centre, Salisbury, S.A.*—Comprises the Advanced Engineering, Electronics Research and Weapons Systems Research Laboratories and provides for their administrative support. DRCS Administration Branch also provides general support services for the Defence Support Centre, Woomera.

*Defence Support Centre, Woomera, S.A.*—Provides an outdoor laboratory essential for weapon system trials in support of R & D programs.

The DSTO Central Office in Canberra has two Divisions:

*Science Programs and Administration Division* provides policy advice on defence science and technology, advises on the formulation and management of the DSTO program of research and development, co-ordinates and analyses bids for resource programs for DSTO, monitors the allocation of resources to the DSTO activities and reviews performance against program objectives, advises on and develops administrative and financial policies for the DSTO, and advises on policy and procedures for professional staff recruitment, assessment and promotion.

*External Relations, Projects and Analytical Studies Division* fosters and co-ordinates DSTO contact with national and international science and technology agencies and the wider community, provides management and advice on major development projects, co-ordinates analytical studies throughout the DSTO and operates the Department's information services (Defence Libraries).

### **Natural Disasters Organisation (NDO)**

NDO's primary peacetime function is to mitigate the effects of disasters. It does this, at the request of State and Territory counter disaster organisations, by co-ordination of physical assistance from the Defence Force and other Commonwealth Government Departments. Non-Government organisations also co-operate with NDO. States and Territories have complete responsibility for their own Counter Disaster Organisations. The NDO and State and Territory Emergency Services together constitute a core civil defence structure.

At the national level NDO develops and implements contingency plans to cope with requests by State/Territory counter disaster authorities for Commonwealth resources during disasters or for civil defence needs. A National Emergency Operations Centre located at NDO headquarters in Canberra provides a focal point for the co-ordination of national efforts when required and maintains communication with State and Territory authorities and Commonwealth Departments during disasters or potential disasters such as impact on Australian territory of space debris.

On behalf of the Australian Development Assistance Bureau, NDO acts in an advisory, planning and operational capacity for that Australian overseas disaster preparedness and relief which involves the use of Commonwealth Government resources.

A number of Commonwealth funded support programs for State/Territory Emergency Services are administered by NDO. These include—the supply of emergency type equipment such as radios, rescue vehicles, generators, flood rescue boats, etc.—reimbursement of salaries of State/Territory full time organisers at regional level—subsidies on a limited dollar for dollar basis to provide accommodation for State/Territory Emergency Service Units at local government level—the provision of public information material and training handbooks.

Other programs which benefit all organisations having a counter disaster involvement and the community generally are—training at the Australian Counter Disaster College, Mt Macedon, Victoria, or by College mobile teams in State/Territory—maintenance of emergency broadcasting facilities.

### **OFFICE OF DEFENCE PRODUCTION**

The Department of Defence has, within the overall defence, industry and employment policies, the goal of providing optimum support for the nation's defence effort in peace and war.

The Department is responsive to the requirements of the Australian Defence Force and to the need to revitalise and further develop the industry infrastructure which supports that force. It provides support in terms of production, purchasing and supply of defence materiel as well as support and stimulation of defence related technological and industrial development in Australia.

The Office of Defence Production (ODP) was created in December 1984. The central task of the ODP is the management of government-owned factories and dockyards, and the maintenance of an industrial capacity needed for strategic purposes.

Apart from a central office in Canberra and some regional staff, most ODP staff are located in production establishments. There are fifteen establishments within ODP, employing close to 15,000 people and with an annual turnover of about \$500m. Of the fifteen establishments:

- eight are engaged in producing munitions, explosives, other ordnance and engineering products and a range of equipment ranging from small generating sets to artillery and large fire-fighting vehicles;
- the Australian Government Clothing Factory specialises in providing uniforms and other military clothing;
- the Government Aircraft Factories, at Fishermens Bend and Avalon in Victoria, are Australia's main facilities for designing and producing manned and unmanned aircraft, and guided weapons;

- Garden Island Dockyard undertakes the repair, refit, docking, modernisation and conversion of surface naval ships; tests weapons and control and communication systems in naval vessels;
- Williamstown Dockyard is primarily concerned with the construction and modernisation of naval ships to destroyer size;
- The Guided Weapons and Electronics Support Facility in New South Wales provides a range of technical support in electronics-related fields, including guided weapons for the defence force and industry; and
- Aircraft Engineering Workshop, situated near Adelaide, does short-run work in aircraft components and ground support equipment, plus a range of commercial work.

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**IN RETROSPECT.....Year Book No 10 (1901-1916)**

(v.) **Visit and Report by Sir Reginald Henderson.** At the invitation of the Government, Admiral Sir Reginald Henderson visited Australia to advise upon naval matters generally. A summary of his report will be found in Official Year Book No.6, pp. 1067-8. It provided for 52 vessels and 15,000 men; expenditure on construction, works, etc., £40,000,000, with an ultimate annual naval vote of £4,794,000. Six naval bases, and eleven sub-bases, were recommended. The 52 vessels would consist of 8 armoured cruisers, 10 protected cruisers, 18 destroyers, 12 submarines, 3 depot ships, 1 fleet repair-ship, and the construction would extend over 22 years.

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## CHAPTER 5

### INTERNATIONAL RELATIONS

The basic principles underlying the shaping and conduct of Australia's foreign policy are that Australia is a significant middle-level power with democratic institutions; having strong affiliations with other Western countries but an emerging Asia-Pacific identity through its increasing regional involvement.

Australia's prosperity is largely dependant on trade; it is geographically remote from its founding nation and principal migration source countries and from some of its major markets and its main allies; it is a relatively affluent and resource rich country in a populous, developing and rapidly changing region.

Initially, Britain and the Commonwealth countries were the central elements of Australia's foreign policy and activity. Later, partly as a consequence of the vital role played by the United States of America in the Pacific during the Second World War, close relations were also developed with that country.

While these links, and links with Western Europe, remain important factors in Australian foreign policy in terms of cultural tradition, security, strategic interests and trade, the specific focus of policy has shifted in the past 25 years to the Asia-Pacific region.

Australia is located in a region which includes the politically, economically and strategically significant countries of East Asia, South Asia, the Indian Ocean and many newly independent nations of the South Pacific. Awareness of the importance of these neighbouring states has led successive Australian Governments to seek to promote and maintain friendly and co-operative relations with them, not only to ensure the stability and security of the region, but also to develop mutually profitable trade, investment, exchange of technology, and co-operation in the development process. Australia gives special attention to its relations with China, Japan, ASEAN (the Association of South East Asian Nations) and its members, New Zealand, Papua New Guinea and the other South Pacific states.

Australia has also been concerned at the increasing instability in the world strategic environment, particularly in South West Asia, Indo-China, the Middle East and Africa, and also at the urgency of the need for effective arms control and a reduction in East/West tensions. Australian foreign policy is committed to an independent constructive approach to those central issues within the framework of the Western alliance.

International issues (economic, disarmament, resources, human rights, refugees, North-South relations, etc.) and new concepts of national interest have assumed importance together with an increasing recognition of the growing interdependence of the world community. This is reflected in economic issues, disarmament and arms control and human rights becoming priorities in Australia's foreign policy. Australia recognises the importance and growing complexity of economic issues, particularly the slow recovery of world trade and economic development and the major problem of world debt affecting both developed and developing countries. The growing interdependence of national economic and foreign policies and the increasing vulnerability of Australia's economy to international trade and other developments will remain at the heart of Australia's foreign policy concerns for some while to come. Australia places a high priority on its participation in the resolution of these global issues in the United Nations and other multilateral forums, including the Commonwealth.

#### The United Nations

Successive Australian Governments have reaffirmed their support for the United Nations (UN), its Charter and the work being done in the various specialised agencies. Within the United Nations and other organisations, Australia seeks to work toward the solution of the pressing problems confronting humanity today.

Australia is involved in a wide range of United Nations matters and has served on many United Nations bodies. It was a member of the Security Council in 1945-46, 1956-57 and 1973-74 and was elected for a further term in 1985-86. The Security Council has primary responsibility for the maintenance of international peace and security. In 1975, a long period of Australian membership of the Trusteeship Council came to an end with the independence

of Papua New Guinea. Australia was a long-standing member of the Special Committee on Decolonisation until its withdrawal in January 1985 following UN recognition of the Cocos (Keeling) Islands' decision to integrate with Australia. Australia remains a member of the UN Council for Namibia.

Australia supports the work of the specialised agencies and subsidiary bodies in such areas as development assistance, drug control and human rights. It is an active participant in the economic work of the United Nations, through such forums as the UN Conference on Trade and Development (UNCTAD) and is on the Governing Council of the UN Development Program (UNDP). Australia will continue its active participation in the UN Industrial Development Organisation (UNIDO) which has recently acquired the status of a UN specialised agency. Australia is a member of the Commission on the Status of Women and the Commission on Human Rights. It was re-elected for a further four year term on the Commission on Narcotic Drugs in June 1985. It is on the Executive Board of the UN Children's Emergency Fund (UNICEF), the Governing Council of the UN Environment Program (UNEP) and is long-standing member of the Governing Body of the International Labour Organisation. Australia is an active member of the UN Education, Scientific and Cultural Organisation (UNESCO) and its prominent role in world refugee assistance is reflected in membership of the Executive Committee of the UN High Commissioner for Refugees.

Australia has made a significant contribution to UN peacekeeping activities since these began. Australia has also contributed its assessed share of the costs of all UN operations and makes voluntary contributions as well as providing personnel and equipment for peacekeeping forces. At present Australia provides personnel for the UN forces in Cyprus and in the Middle East.

Australia is fully involved in the work of the UN on disarmament and outer space, and is a member of the main subsidiary bodies working in these areas.

Australia accepts the compulsory jurisdiction of the International Court of Justice and plays an active role in bodies concerned with the development of international law.

### **The Commonwealth**

The Commonwealth is a distinctive and unique framework bringing together about a quarter of the world's population in 49 countries. Australia, through its participation in the broad range of Commonwealth activities, seeks to foster the Commonwealth as an instrument for peace and understanding, and for political, social and economic advancement. Australia hosted the Commonwealth Heads of Government Meeting (CHOGM) in Melbourne in September-October 1981.

### **South East Asia**

Australia maintains wide-ranging relations with the countries of ASEAN (Indonesia, Malaysia, the Philippines, Thailand, Singapore and Brunei) both bilaterally and as a group. These relationships include political, commercial, defence and person-to-person contacts. There is extensive contact at the senior political level. In the first half of 1985, the Minister for Foreign Affairs, Mr Hayden; the Minister for Trade, Mr Dawkins; the Minister for Science, Mr Jones; and the Minister for Immigration and Ethnic Affairs, Mr Hurford all visited ASEAN countries. A number of senior political visitors from ASEAN countries came to Australia in the same period.

Australia values the contribution made by the ASEAN countries to the promotion of regional stability and co-operation and was the first country to establish a formal relationship with ASEAN as a group. The momentum of this relationship was maintained when Mr Hayden attended the ASEAN Post Ministerial Conference in Kuala Lumpur in July 1985 and senior officials from Australia and ASEAN met in the Ninth ASEAN-Australia Forum in Malaysia during February 1985. The Tenth Forum is to be held in Australia early in 1986. Trade and development co-operation are the two major matters discussed in the Forums, with Australia now having committed over \$A100 million since 1974, to the ASEAN-Australia Economic Co-operation Program which includes a diversity of projects in such areas as trade and investment promotion for ASEAN in Australia; post-harvest food handling and non-conventional energy.

Australia has developed a strong relationship with Burma. Australia's development assistance program is the central feature of the relationship; in 1984-85 this amounted to \$9.15 million.

Australia is concerned by the destabilising effects on the South East Asia region posed by the Cambodia dispute. Australia's policy has been to promote dialogue between the major parties to the dispute in order to reach a negotiated, peaceful and durable settlement. To this end, the Australian Government has hosted visits by a number of senior foreign leaders and officials in 1984-85. The Minister for Foreign Affairs, Mr Hayden, visited several South East Asian countries, including Vietnam and Laos, in March 1985.

Australia is also developing a more mature and comprehensive relationship with Vietnam including in the fields of cultural exchanges, trade and aid through multilateral and NGO channels. It is also continuing to develop a relationship with Laos.

### Asia

Australia believes that peace and prosperity in Asia depend largely on the countries in the region to co-operate to secure these objectives and in ensuring that no major power, either inside or outside the region, is able to exert an undue influence in the area.

Australia's primary interest and concern in Asia has long been reflected in its vigorous role in regional association and organisations such as the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the Colombo Plan, the Asian Development Bank and in many other organisations, both private and government.

Japan is by far Australia's largest trading partner and a significant source of investment funds, with total trade now in excess of \$12,500 million a year. The relationship with Japan is based on complementary economic interests and shared perceptions of international issues. Relations in political, cultural, scientific, sporting and other areas are being fostered by both governments. The Japanese Prime Minister, Mr Nakasone, accompanied by Foreign Minister, Mr Abe visited Australia in January 1985, reciprocating the Prime Minister, Mr Hawke's visit to Japan in January-February 1984. A large number of Ministerial visits between the two countries have taken place in the last year. The eighth Australia Japan Ministerial Committee Meeting was held in Tokyo in June 1985. Six Australian Ministers, including the Minister for Foreign Affairs, Mr Hayden attended the meeting which focused on bilateral trade and economic issues, in particular, market access to Japan.

Australia attaches a high priority to its relations with China. The bilateral relationship has expanded rapidly in the last few years, and now covers a broad range of contacts in many areas. Trade is substantial, and there are exchanges in culture, science, agriculture, education, legal affairs, business management and industrial technology, and the media. There is a development assistance program under the Technical Co-operation agreement. The Australia-China Council sponsors the expansion of bilateral contacts. Australia and China engage in frequent political consultations, a process which has been facilitated by an exchange of high-level visits. In April 1983 Australia hosted a visit by China's Premier, Mr Zhao Ziyang, the first Chinese Head of Government to visit Australia, a visit reciprocated by Prime Minister Hawke in February 1984. The Minister for Foreign Affairs, Mr Hayden, visited China in August 1983, and there were visits by eight Australian Ministers to China during 1984. In April 1985, Mr Hu Yaobang, General Secretary of the Chinese Communist Party, visited Australia. High level visits are now very regular, and consideration is currently being given to enhancing the bilateral relationship at all levels. Australia's development assistance program to China has grown rapidly since the conclusion of a technical co-operation agreement in 1981.

Australia is developing its relations with Laos and is providing a small program of development assistance. Australia maintains normal diplomatic relations with Vietnam but the bilateral relationship has been affected by Vietnam's military occupation of Kampuchea.

Australia also recognises the strategic, economic and political importance of the countries of South Asia. Although outside Australia's immediate area of strategic concern, these countries sit astride major Australian shipping, civil aviation and communication links. Australia has close relations with all the countries of the region and has recently sought to upgrade relations with them, especially India, which is the most militarily powerful country in the Indian Ocean, the world's most populous democracy, a leading member of the Third World and among the world's largest in terms of industrial output. Australia provides technical and developmental assistance to all the countries of South Asia. In May 1985 the Minister for Foreign Affairs, Mr Hayden, made official visits to India, Pakistan, Sri Lanka and Nepal.

### **South Pacific**

Australia looks to consolidate and expand its co-operative activities to promote the stability, welfare, harmony and economic development of the region. Australia has moved deliberately to develop and extend its bilateral relations with the Island countries and now has nine diplomatic missions in the area. Australia's aid program in the South Pacific takes account of the special needs of small island nations. A five-year forward indicative planning figure of \$300 million for aid to the South Pacific (excluding Papua New Guinea) was approved by the Government in 1983. A further amount for defence co-operation projects in the countries of the South West Pacific was allocated for 1983-84. In 1983-84 \$6.178 million was allocated.

As the largest of the South Pacific Island States, Papua New Guinea (PNG) has played, since independence, an influential and leading role in the region. Australia and PNG have a close and warm relationship which encompasses a broad range of Government and non-government activities. Papua New Guinea is the major recipient of Australian aid. In 1985-86, the last year of the current five-year aid agreement, Papua New Guinea is expected to receive \$326.4 million in development assistance. A new five year aid agreement to commence in the 1986-87 financial year was concluded in September 1985.

Australia was a foundation member of the South Pacific Commission, the South Pacific Forum and the South Pacific Bureau for Economic Co-operation and has become a party to the convention establishing the Forum Fisheries Agency. Australia takes part in these and the many regional meetings held in the Pacific to act on a broad range of issues of common interest. Besides contributions to ESCAP, SPEC, and the SPC, financial support for other regional and international programs developed in the South Pacific is being maintained in 1984-85. Australia has also established a fund to promote the preservation and development of Pacific cultures. Australia and New Zealand have entered into a non-reciprocal preferential trade agreement in favour of South Pacific Forum States: the South Pacific Regional Trade and Economic Co-operation Agreement (SPARTECA). Australia took part in the 16th South Pacific Forum held in Raratonga, Cook Islands in 1985. At the meeting, the treaty establishing a South Pacific Nuclear Free Zone was signed by eight members of the Forum.

Relations between Australia and New Zealand are particularly close. They are based on shared history, close economic ties, and common problems in dealing with the current international political and economic environment. The implementation in 1966 of the New Zealand-Australia Free Trade Agreement (NAFTA) established a special trading relationship between the two countries. Negotiations on an agreement to replace NAFTA began in 1980. These led to the signing in March 1983 of the Australia New Zealand Closer Economic Relations-Trade Agreement designed to assist both countries to further expand their mutual economic and trading links.

A Ministerial Meeting held in August 1985 was the occasion for reaffirmation, by both Australian and New Zealand Ministers, of support for the Agreement. Preparations were set in train for a Review of the Agreement scheduled for 1988.

In 1978 the Australian Prime Minister and the New Zealand Deputy Prime Minister, in a joint statement, affirmed that Australia and New Zealand were linked by deep ties of common origin and shared ideals which gave a sound basis for the closest co-operation. With this in mind they agreed to the establishment, on both sides of the Tasman, of the Australia New Zealand Foundation. The structure of the Foundation enables both Branches to work independently. They may, however, work together on special projects, the most important and recent example of this being the Trans-Tasman Attitudinal Survey, commissioned by both Boards to ascertain the attitudes of the populations of both nations toward each other. The study has gone a long way to provide the Foundation with a solid information platform upon which to base its future activities. The Foundation is government-funded and is administered by a Secretariat drawn from staff of the Department of Foreign Affairs.

### **The Americas**

Australia has a long-standing and close relationship with the United States which extends across the whole range of the national life of both countries. Government-to-Government relations are only one part of a larger and more extensive interaction between the two countries which derives from common experiences, culture and language. In general, relations between the countries are warm and co-operative, with a high degree of official political consultation and a close personal relationship between the political leaders. The affinity

between Australia and the United States is underpinned by substantial economic and commercial relations which, however, have occasional difficulties. The United States in 1984 was Australia's second largest supplier of imported items and our second largest export market after Japan.

Canada is, to a greater degree than other nations, a country comparable with Australia in terms of institutions and traditions, geographical size, economic standing and international outlook. The genuine goodwill established between the two countries has allowed Canada and Australia to co-operate on the achievement of mutually desirable objectives, reflecting individual national interests and competition in certain commercial fields.

Developments in the Caribbean and the Latin American region are of increasing importance to Australia, and resident missions have been established in Jamaica, Mexico, Chile, Argentina, Brazil, Peru and, most recently, Venezuela. Australia has observer status at the annual General Assemblies of the Organisations of American States. In December 1983, the Minister for Foreign Affairs, Mr Hayden, announced the establishment of diplomatic relations with El Salvador, Nicaragua and Honduras, on the basis of non-resident accreditation. Australia now has diplomatic relations with all the countries of Latin America.

### **Europe**

Australia attaches considerable importance to maintaining warm and friendly relations with the countries of Western Europe, with the European Community and its institutions, including the European Parliament.

Bilateral relations with individual Western European countries continue to be of considerable importance. These relations are promoted by the very close cultural and historical links we share with these countries and are reinforced by similar approaches to international issues and a shared commitment to democratic values and human rights. Economic ties between Australia and the major Western European economies are likely to be significantly strengthened with the increase of European investment in Australia and the increase in the export of Australian energy resources to Europe.

The European Community (EC) is Australia's second largest trading partner and a major source of investment funds and technological expertise, as well as a significant importer of Australian raw materials. This natural complementary relationship has however been tempered by tensions caused by trading difficulties in the agricultural sector. Australia nonetheless remains committed to the strengthening of a positive relationship with the EC on the principle of enlightened self-interest.

The visit to Brussels by Mr Hawke in February and the fourth round of regular EC-Australian ministerial consultations in June have provided opportunities for Australia to express its concern over EC agricultural policies. The Europeans have to some extent responded by restricting beef exports to traditional Australian markets in S.E. Asia.

The low voter turnout at the second direct elections for the European Parliament in June 1984 tends to suggest that the Community countries are already beginning to take the Parliament somewhat for granted as a permanent political institution, unifying interests which transcend national boundaries. The Parliament is becoming increasingly important in Community affairs, particularly through the budget process, although it still lacks the right to initiate Community-wide legislation. Since its formation four years ago the European Parliamentary Delegation for Relations with Australia has had regular contact with the Australian Parliament, the latest example of which is the scheduled visit to Australia of a European Parliamentary delegation in November, 1985.

Following the Government's decision in May 1983 to normalise relations with the USSR, activities have been restored or initiated across a broad range, contributing to the objective of a pragmatic and constructive relationship. Trade has developed and expanded, important events being the first joint session of the Australia/USSR Business Council in Moscow in May 1985, and the planned Australian Trade Display in Moscow in October. Agreement has been reached on renewed programs of exchanges in culture, science and technology. A number of high-level Soviet visits were made to Australia in 1985, including one by Deputy Foreign Minister Kapitsa and a senior Soviet disarmament delegation. A Soviet parliamentary delegation also visited Australia in May 1985, and the Australian Parliament has accepted an invitation to send a return delegation to the USSR.

Eastern Europe is a sensitive area in world affairs and Australia has an interest in the maintenance of a balanced East-West relationship. Eastern Europe also has significant potential for Australian exports, particularly commodity exports, although there have been

significant debt problems emerging in some Eastern European countries in recent years. The presence in Australia of large ethnic groups, many of which have family in Eastern Europe, has raised the question of freedom of emigration from those countries.

Australia now has diplomatic relations with all countries of Eastern Europe, following the accreditation of the Australian Ambassador in Belgrade to Albania in September, 1984. A resident Ambassador to Hungary was appointed in April 1985.

### **The Middle East**

Australia has substantial trading interests in the area and long-standing friendly relations with the Arab nations, Iran and Israel. Australia supports efforts to bring about negotiation of differences in the region, e.g. in such areas of conflict as the Arab-Israel dispute, the problems facing Lebanon and the Iran-Iraq war. Australia supported the Camp David accords and the peace treaty between Israel and Egypt, seeing them as first step towards a just, lasting and comprehensive settlement of the Arab-Israel dispute. Australia supports all efforts to negotiate the dispute, and believes a settlement should be based on UN Security Council Resolution 242 (which, inter alia, recognises the right of all States in the area to live in peace within secure and recognised boundaries and calls on Israel to withdraw from territories captured in 1967) and on recognition of the central importance of the Palestinian issue, including the right of self-determination for the Palestinian people and, if they so choose, the right to independence and the possibility of their own independent State. The Government recognises, however, that any such arrangement will depend on decisions involving people of the immediate region. The Government agreed to an extension of the participation of an Australian contingent in the Sinai Multi-national Force and Observers (MFO), which monitors the Egypt-Israel border area, for a maximum period of two years from April 1984, to allow a replacement to be found. The Canadian Government is to provide replacements for the Australian force.

### **Africa**

Australia maintains a broad range of contracts with independent black African States, and is closely concerned with developmental and humanitarian issues affecting Africa. It maintains a policy of no racial discrimination and strong opposition to apartheid including support for the Commonwealth statement on Apartheid in Sport (The Gleneagles Declaration). Australia supports international efforts to bring pressure to bear on the South African Government to abolish apartheid, which it regards as an inhumane practice and the root cause of confrontation and violence in Southern Africa. Australia maintains correct but cool diplomatic relations with South Africa. Australia also supports international action to bring Namibia to independence by the negotiated settlement in accordance with United Nations Security Council Resolution 435. Following recent reviews, Australian aid to Africa is being focussed on Eastern and Southern Africa. This includes assistance given through the Southern African Development Co-ordination Conference. Food aid constitutes the dominant share of Australian aid to Africa because of growing food deficits and the recent famine crisis.

### **Indian Ocean**

On 17 January 1984, the Minister for Foreign Affairs, Mr Hayden, announced that the Government had approved guidelines for a comprehensive and integrated policy approach to Indian Ocean issues. Under the guidelines Australia will: act in accordance with its status as an independent but aligned Indian Ocean Littoral State; continue to play an active role in the United Nations Ad Hoc Committee on the Indian Ocean; maintain the goal of the resumption of United States—Soviet talks on arms limitations in the region; and support other arms limitations initiatives where these accord with Australia's assessment of its own interests and those of the region as a whole. Australia will also seek to give greater attention to the development of relations with Indian Ocean island States, and, to a lesser extent, East African States.

### **ANZUS**

Following a detailed review of the ANZUS Treaty by the Australian Government, including a re-examination with its ANZUS partners at the 1983 ANZUS Council Meeting in Washington, the alliance was reaffirmed as fundamental to Australia's national security and foreign and defence policies. The text of the ANZUS Treaty of 1952 can be found in Treaty Series No. 2, for 1952, printed by the Department of External Affairs. After the New Zealand Government implemented, in early 1985, a policy not to permit the entry to New Zealand ports of nuclear powered or armed warships and the consequent halt to military co-operation between the USA and New Zealand, Australia reviewed the handling of its ANZUS

and other defence links with the USA and New Zealand. Each of the three parties to the ANZUS Treaty has reaffirmed its commitment to maintaining the Treaty. Australia is actively maintaining on separate bilateral bases its close defence links with the USA and also with New Zealand.

### **Nuclear issues**

Australia's strong commitment to effective disarmament and arms control is reflected in Australian support for the international non-proliferation regime. Australia ratified the Nuclear Non-Proliferation Treaty (NPT) in 1973 and encourages universal adherence to it. Australia strongly supports the NPT and is active in preparations designed to ensure the success of the third review conference of the NPT to be held in 1985. Australia is also a member of the International Atomic Energy Agency (IAEA) and, as a member of the IAEA Board of Governors, has important responsibilities for the effectiveness of (IAEA) activities and supports endeavours to strengthen the IAEA's international safeguards system. Australia plays an active role in IAEA committees and in other international bodies dealing with the clarification of multilaterally agreed guidelines on export controls for non-proliferation purposes.

The nuclear safeguards arrangements governing the export and subsequent use of Australian uranium were reviewed in 1984 in a report commissioned by the Government and undertaken by the Australian Science and Technology Council (ASTEC). The Government will consider the recommendations arising from the ASTEC report and will make its responses in due course. In the interim, exports of Australian uranium under existing contract are being permitted—except in the case of France—in accordance with the conditions set out in binding bilateral nuclear safeguards agreements with customer countries. These conditions include an undertaking not to use Australian origin nuclear material for any military or explosive purpose, and the acceptance of IAEA safeguards in order to verify that undertaking.

Australia is also a member of the Nuclear Energy Agency (NEA) of the Organisation for Economic Co-operation and Development (OECD). Australia values the NEA as an essentially technical forum for international consultation on nuclear issues.

### **Disarmament and arms control**

Australia is energetically promoting arms control and disarmament objectives at the United Nations and the Conference on Disarmament in Geneva. In July 1983 the Government announced the appointment of Australia's first Ambassador for Disarmament whose principal role is to represent Australia on the Conference on Disarmament and at other disarmament forums. Australia attaches particular priority to the earliest possible conclusion of a treaty banning all nuclear testing by all States in all environments for all time (a Comprehensive Test Ban) and is working to uphold and strengthen the Nuclear Non-Proliferation Treaty. Although not a party to any negotiations on reductions of nuclear weapons between the United States and the USSR, Australia continues to encourage genuine dialogue and a readiness to find accommodation with the aim of stable mutual deterrence. It has called for early agreement on arms reductions and related outer space issues in the current Geneva negotiations. Australia seeks a balanced, mutual and verifiable freeze on the production, testing and deployment of nuclear weapons, which would be followed by deep reductions in nuclear weapons stockpiles. Australia was at the forefront of efforts within the Pacific region which resulted in the endorsement and opening for signature of a South Pacific Nuclear Free Zone Treaty during the meeting of the South Pacific Forum in Rarotonga, Cook Islands in August 1985. Australia also accords priority to a number of non-nuclear disarmament questions. It is committed to supporting the conclusion of a fully effective and verifiable chemical warfare convention that would outlaw the use of chemicals as weapons. Australia will be active in efforts aimed at strengthening the 1972 Biological Weapons Convention by improving its verification provisions. Australia is concerned at the implications for strategic stability of the research into ballistic missile defences being conducted by both superpowers and is pressing for international agreements to prevent an arms race in outer space. Australia actively supports the United Nations World Disarmament Campaign and the United Nations Institute for Disarmament Research (UNIDIR) and will be participating actively in the 1986 International Year of Peace. Australia has acceded to the following disarmament and arms control agreements: the Partial Test Ban Treaty, the Geneva Protocol (on the Prohibition of the Use in War of Asphyxiating Poisonous or Other Gases and of Bacteriological Weapons), the Outer Space Treaty, the Sea-Bed Arms Control Treaty, the Nuclear Non-Proliferation Treaty, the Biological Weapons Convention, the Environmental Modification Convention, the Antarctic Treaty, and the Inhumane Weapons Convention. Australia was the first signatory to the South Pacific Nuclear Free Zone Treaty on 6 August (Hiroshima Day) 1985.

### **Economic relations**

In recent years economic factors have assumed increasing importance in international relations. This is largely due to the growing economic interdependence between nations and the need for global co-operation to solve the problems facing domestic economies, particularly at a time of world recession.

Australia's interest in international economic developments derives from the overall importance of trade to Australia and its historical reliance upon a substantial amount of capital inflow to offset balance of payments deficits on the current account.

The economic recession of the world economy in the 1970s and 1980s has led to the growth world-wide of protectionist pressures and moves towards seeking solutions to economic problems through bilateralism and the formation of trade blocs. The Australian Government has endeavoured to counter these harmful trends and to encourage freer trade through its involvement in forums such as the General Agreement on Tariffs and Trade (GATT). GATT is the principal multilateral institution for negotiation of reduction in trade barriers in pursuit of the further liberalisation of world trade. Australia has consistently supported a reduction in barriers to trade and the concept of an open and multilateral trading system.

Australia also has a strong commitment to the freedom of international capital flows. Because it is a net capital importer, it is of considerable importance to Australia that the international system be increasingly open and adaptable to facilitate the global exchange of goods, services, labour and capital. This is all the more so in view of the significant challenges imposed on the international monetary system by the dramatic changes in the world economy during the past decade.

Because of its particular characteristics and location, Australia is vitally dependent on its aviation, shipping and communication links with the rest of the world. Civil aviation has assumed particular prominence in Australia's foreign policy considerations in recent years, notably in its relations with countries in the region. The maintenance of Australia's air links with Europe and the United States, furthermore, involves dealings not only with the countries to which Australia's international airline, Qantas, operates these services, but also with the countries which Qantas overflies on these routes or where it enjoys stop-over rights.

Australia continues to attach great importance to its traditional relations with other developed countries, which continue to be Australia's principal trading partners. Membership of the OECD enables Australia to take part in consultations on a wide range of policy issues and on issues of international concern with countries experiencing similar social and economic circumstances. The Organisation's role in developing its members' policies on relations with developing countries, including the North/South dialogue, also makes it an important element in Australia's foreign policy. Australia is a member of the International Energy Agency, which has developed into the major forum for continuing consultation and co-operation on energy matters between most of the major industrialised nations which are Australia's principal trading partners.

### **North-South relations**

Australia seeks to play a constructive role in the dialogue on international economic development issues between the developed ('the North') and developing countries ('the South'). Australia's approach to North-South issues is based on the belief that not only are there compelling humanitarian reasons for finding solutions to the many problems facing the world economy and the developing countries in particular, but also that the degree of interdependence in the world economy makes progress imperative for international stability and economic growth. Australia's approach is also influenced by the predominance of developing countries in the region and by the fact that Australia shares a number of economic interests with the developing countries, e.g. it is a leading producer and exporter of a wide range of primary products and an importer of capital and technology.

Australia considers that the North-South dialogue should promote the effective and equitable intergration of developing countries into the international economic system, which will in turn be strengthened by such a trend.

### **Law of the Sea**

Australia participated in all sessions of the Law of the Sea Conference, the largest and potentially the most important conference in the history of the United Nations, involving major strategic, economic, transport, scientific and environmental issues. The Convention opened for signature on 10 December 1982 and Australia signed that day. It had attracted 158 other signatures by the time it closed for signature two years later. The Convention will enter into force twelve months after it receives 60 ratifications or accessions. The text



includes articles on the system of exploration and exploitation of the deep seabed beyond the limits of national jurisdiction; extension of the territorial sea to 12 nautical miles; establishment of coastal state sovereign rights in the living and non-living resources of an "exclusive economic zone" of 200 nautical miles; recognition of coastal state sovereign rights over the exploration and exploitation of the natural resources of the continental shelf, defined in terms of the natural prolongation of the land-mass; protection and preservation of the marine environment; marine scientific research; and the settlement of disputes. Rights of freedom of navigation and passage through straits and archipelagos, which are important to trading nations such as Australia, are also recognized. A preparatory commission for the establishment of the International Seabed Authority and its various organs has been meeting biannually since 1983. Australia has been an active participant in its work.

### **Antarctica**

Australia has had a long association with Antarctica commencing with early expeditions and continuing with an active scientific program. Antarctica's importance to Australia derives from its geographical proximity, the history of Australian involvement there and Australian administration of the Australian Antarctic Territory. Australia maintains three permanent bases in the Territory at Casey, Davis and Mawson (as well as one on Macquarie Island).

As one of the twelve original signatories, Australia attaches particular significance to the 1959 Antarctic Treaty, which serves important Australian scientific, environmental and security interests. Australia hosted the first Antarctic Treaty Consultative Meeting in Canberra in 1961. Such meetings are held about every two years in one of the Consultative Party States, and in 1983 Australia was host to the twelfth meeting. There are now sixteen Antarctic Treaty Consultative Parties.

In 1980, at a conference in Canberra, a Convention for the Conservation of Antarctic Marine Living Resources was concluded. Annual meetings of the Commission and the Scientific Committee established by the Convention have been held in Hobart since 1982. The Commission is the first international organisation to be established in Australia. Australia has also participated in a series of special consultative meetings to negotiate a regime to regulate the exploration and exploitation of Antarctic minerals. Five sessions have been held so far, and further sessions are scheduled.

### **Treaties**

The texts of bilateral and multilateral treaties to which Australia becomes a party are printed in the Australian Treaty Series when they enter into force. The most recent consolidation of the Australian Treaty List was published as Treaty Series 1979, No. 1. Australia's current position with regard to individual treaties may be ascertained by referring to the 1971 list in conjunction with Cumulative Supplement No. 4 (Treaty Series 1982, No. 10), annual volumes on treaty action in the Treaty Series, and annual volumes on International Treaties and Conventions to which Australia has not yet become a party, in the series 'Select Documents on International Affairs'. These publications are available from Australian Government Publishing Service bookshops in State capital cities.

### **Cultural relations**

The Department of Foreign Affairs administers a program of cultural exchanges with other countries in furtherance of the Government's foreign policy objectives. The program includes exchanges in the performing and visual arts, sport, film and literature as well as academic exchanges. The Department co-operates and consults with appropriate Australian organisations.

Australia has cultural agreements with China, France, Greece, India, Indonesia, Iran, Italy, Japan, Republic of Korea, Malaysia, the Philippines, Romania, Singapore, Thailand, USSR and Yugoslavia.

### **Australian foreign aid program 1985-86**

The Minister for Foreign Affairs, Mr Hayden, established a committee in April 1983 to undertake a major review of Australia's overseas aid program. The Committee's report was tabled in Parliament in June 1984. It was the first attempt for many years to analyse official development assistance as a whole, to outline aid philosophy, to assess the impact of various forms of aid, to consider its geographic spread and to examine the way in which the delivery of Australian aid should be managed. Many of the Committee's recommendations have been implemented. These include an upgrading and structural reorganisation of the Australian Development Assistance Bureau, which administers the official aid program.

Australia's aid program is directed towards promoting the economic and social advancement of developing countries.

Although more than 80 countries receive assistance, Australia's efforts are aimed principally at its neighbours in southeast Asia and the Pacific. Papua New Guinea continues to be the major recipient.

In 1985-86, Australia expects to spend \$1,025.9 million on official development assistance, an increase of \$14.5 million over 1984-85. Of this amount, \$755.1 million or about 75 per cent will be provided as bilateral aid (i.e. directly from one government to another). The major elements of the bilateral program are budgetary support for PNG, project aid (equipment, goods and expertise), the education of Third World students, food aid and assistance through non-government organisations. Over \$249 million has also been allocated to multilateral agencies.

### **Papua New Guinea**

About 32 per cent of Australia's aid goes to Papua New Guinea. In 1985-86 Papua New Guinea is expected to receive \$326.4 million in assistance. The bulk of this amount (\$302.8 million) will be in the form of an untied grant for budgetary support. This amount represents the final payment under a five-year aid agreement concluded between the Australian and Papua New Guinea Governments in September 1980.

In addition to the budget support grant, Australia meets the cost of termination payments and retirement benefits due to employees of the former administration and provides training for Papua New Guineans.

A new five year paid arrangement commences in July 1986. Under this arrangement the level of aid will decline gradually each year and the proportion of budget support aid in the program will gradually decrease.

The purpose of this long-term aid arrangement is to provide PNG with a predictable framework in which to plan its development.

### **Projects and related programs**

Most of Australia's bilateral aid to developing countries other than Papua New Guinea is for specific development activities which range from larger regional development programs with an Australian contribution in excess of \$50 million to small villages projects. Australia is supporting some 300 projects in over 40 countries. Generally, Australia meets the foreign exchange costs of a project, but in some circumstances it also pays some of the associated local costs.

South East Asia receives the bulk of Australia's bilateral project aid. Projects in the region include infrastructure development work, agricultural improvements through crop and livestock research and extension. In recent years Australia has been involved in large-scale, integrated rural development projects intended to bring about the balanced growth of the region.

Under the ASEAN-Australia Economic Co-operation Program Australia will provide \$11.6 million in 1985-86 in support of regional co-operation programs. This is in addition to aid to individual ASEAN member states.

To assist countries of the South Pacific in their development planning the Australian Government has provided an indicative planning figure of \$300 million for aid to the region for the five-year period 1983-84 to 1987-88. Aid to the region is expected to be \$55.7 million in 1985-86. Most of the expenditure is for bilateral projects for Fiji, Solomon Islands, Tonga, Western Samoa, Vanuatu and Kiribati. In recognition of the special needs of island developing countries Australia has introduced special programs for the South Pacific such as limited funding of the local costs of projects, grants to strengthen development banks, accountable cash grants for small-scale activities and a multi-country program to provide cost-effective solutions to development problems affecting groups of countries. Funds are also available for island partners to take up equity in joint business ventures with Australian partners. Australia also provides bilateral aid to the countries of South Asia, Africa and the Indian Ocean.

There are several specialised forms of bilateral aid designed to meet a specific need. These include:

*Staffing Assistance Schemes.* The need for skilled personnel is a major requirement in most developing countries. Staffing assistance is provided to 14 developing countries and involves supplementing local salaries paid to Australian nationals to fill positions in the public sector of recipient countries. The main regions assisted are the South Pacific, Africa and the Indian Ocean. \$5 million has been allocated for staffing assistance schemes for 1985-86.

*Training.* Australia's training aid program is designed to help recipient countries upgrade skills needed for their economic and social development. In 1985-86, \$140.3 million was allocated for training aid. In 1984-85, for the first time, the costs incurred by the Commonwealth Government in educating developing country students (both sponsored and private) attending secondary and tertiary institutions in Australia, were recorded as development assistance.

While students and trainees assisted under the aid program come from about 70 developing countries, South East Asian and the South Pacific countries are the chief beneficiaries. In 1985-86 about 3,500 students and trainees will have the full cost of their studies and subsistence met by the Australian Government. In addition the educational costs of an estimated 15,600 private students will be met in part by the Australian Government.

The development training program provides opportunities to train in Australia either in formal academic courses at tertiary institutions or in specifically designed courses with a practical orientation. Many of the special short courses are run by the International Training Institute in Sydney. Training in institutions in developing countries is also provided under third-country training awards where the training may be more relevant to conditions in the students home country.

Training programs for sponsored students are planned in consultation with recipient governments. A particular effort is made to relate courses of study to developmentally important sectors in each recipient country and to tailor courses to specifically identified needs. Increasing use is being made of training awards associated with projects supported by Australian technical assistance.

*Development Imports Grants.* These grants are provided to certain developing countries in the South Pacific, Africa and South Asia to meet the cost of importing Australian goods required for development purposes. Over \$10 million has been allocated for this purpose in 1985-86.

*Development Import Facility.* This scheme is designed to lower the cost to developing country governments of importing Australian development-related capital goods and services. The facility combines grant aid funds with loans provided by the Export Finance and Insurance Corporation and thereby enables Australian exporters to offer a specific financial package to match the 'mixed credits' already offered by other donor Governments. The Development Import Finance Facility is only available for use in projects which meet priority development criteria. In 1985-86 \$16.0 million will be provided to support of this facility.

*Co-financing Facility.* The co-financing facility with the World Bank allows Australia to support major development projects which are being carried out under the auspices of the World Bank, principally in the Asia-Pacific region. This facility, which has attracted considerable interest from the private sector, provides opportunities for Australian companies to participate in World Bank activities. Projects for Australian co-financing are selected, in consultation with the World Bank and host governments, for their complementarity with the main sectoral objectives of bilateral country programs and Australia's experience in those sectors. Australia generally contributes professional services to help prepare projects to World Bank investment requirements or assist with project implementation. In 1985-86 funds allocated to the co-financing facility total \$14.8 million.

The International Development Program of Australian Universities and Colleges IDP program is designed to help strengthen universities in developing countries in South-East Asia and the Pacific. Assistance is focussed on helping university staff to develop their skills in teaching, research and administration. Activities encompass a wide range of academic disciplines and the program now covers over thirty universities in developing countries. \$7.2 million has been allocated in supported of this program 1985-86.

*Food aid and food security.* Australia is responding to world food problems in two ways: by addressing the short-term problem of food shortages with food aid; and by helping developing countries supply more of their own food requirements in the long term. In 1985-86, \$121.2 million has been allocated to the food aid program.

The Government is committed under the Food Aid Convention (FAC) to provide a minimum of 400,000 tonnes of foodgrain annually. Australia is increasingly drawing on the capacities and skills of the World Food Program (WFP) in distributing and monitoring the food aid program. In 1985-86, 50 per cent of the FAC commitment will be channelled through the WFP which is noted for its skill in using food aid in association with projects to develop rural infrastructure and stimulate agricultural production.

Australia also provides foodgrain bilaterally to food-deficit countries. In assessing individual needs such factors as food consumption requirements, GNP per capita, calorie consumption, infant mortality rates and life expectancy levels, international reserves, import capacity, crop outlook and increasingly, emergency situations are all taken into account.

There is a growing emphasis in the program on meeting emergency needs brought about by unfavourable climatic conditions, refugee flows and other factors. In addition to food supplied from the FAC commitment, Australia also meets these emergency needs from a special 50,000 tonne allocation to the International Emergency Food Reserve.

Apart from foodgrain, an allocation of \$3.4 million is set aside to provide non-grain foods such as high protein biscuits for use in feeding projects for vulnerable groups and for emergencies. In addition, \$434,000 will be provided in 1985-86 for food security schemes aimed at improving the long-term food security in developing countries. Programs to be supported will include improving food production, storage, marketing and food distribution systems.

A further major initiative in the food security area was the establishment of the Australian Centre for International Agricultural Research (ACIAR) in 1982. ACIAR manages and supports research into agricultural problems of developing countries in fields in which Australia has special competence. Research is conducted by Australian institutions in partnership with developing country institutions. By January 1986 over 70 projects were underway in fields such as soil and water management, plant nutrition and improvement, animal health and production, forestry and agricultural economics. In 1985-86 \$14.4 million will be available to support ACIAR's program, of which \$2.8 million will be drawn from the ACIAR trust account.

#### **Non-Government Organisations**

The Australian Government gives financial assistance to a number of Australian Non-Government Organisations (NGOs) for development assistance activities. Support for these activities in 1985-86 is expected to be approximately \$18.2 million.

The principal avenue of Government/NGO co-operation is the Project Subsidy Scheme under which eligible NGOs are assisted to undertake a variety of small-scale projects at 'grass roots' level in developing countries. In 1985-86 \$6.8 million will be provided for this purpose.

Some \$2.3 million is also provided for schemes utilising the skills of Australian volunteers, including the Australian Volunteers Abroad Scheme, the Australian Executive Service Overseas Program and the Australian Overseas Disaster Response Organisation.

A number of international NGOs such as the International Committee of the Red Cross receive Australian government support. Support for these organisations will be about \$1.7 million in 1985-86.

#### **Multilateral aid**

Australia contributes to several international and regional organisations and financial institutions concerned with aid to developing countries. They include the World Bank Group, Asian Development Bank, United Nations Development Program and other UN agencies, International Fund for Agricultural Development, Commonwealth Fund for Technical Co-operation, Economic and Social Commission for Asia and the Pacific, South Pacific Bureau for Economic Co-operation, South Pacific Commission and various international science, technology and research centres. Support for these bodies provides Australia with an opportunity to participate in major development projects which are beyond the resources of individual donors.

The Australian contribution to international financial institutions in 1985-86 is expected to be \$110.4 million. Included in this amount is \$62.5 million which will be provided to the International Development Association, the soft-lending affiliate of the World Bank, which directs its work towards assisting the poorest countries. Other major contributions in 1985-86 involve provision of some \$23 million for the Asian Development Fund, \$11.7 million for the International Bank for Reconstruction and Development and \$6.0 million for the Asian Development Bank.

Payments to UN, Commonwealth and regional programs are estimated at \$126.4 million (including \$62.7 million to the WFP). Bodies supported include the UN Development Program, which is the largest UN funding agency for technical assistance and also plays a co-ordinating role within the UN system in the technical co-operation field; UNICEF, which directs its main efforts to furthering the interest of children and young people in developing

countries; and the UN Fund for Population Activities, which is directly concerned with assistance related to population problems. The United Nations High Commissioner for refugees and United Nations Relief and Work Agency work to assist refugees, the former being engaged world-wide and the latter having a specific charter to assist Palestinian refugees. Support is also given to other UN organisations such as the UN Industrial Development Organisation and the UN Environmental Program.

A contribution to the Commonwealth Fund for Technical Co-operation of \$6.6 million will be provided in 1985-86 to meet priority technical assistance needs of developing Commonwealth countries. Other Commonwealth programs supported include the Commonwealth Youth Program.

In 1985-86 \$9.0 million will be provided for the international science, technology and research programs including support of a number of international agricultural research institutions within the Consultative Group on International Agricultural Research.

### **Refugees and Disaster Relief**

In 1985-86 an amount of \$16.1 million will be provided to allow for an Australian response to emergency, disaster and refugee situations in developing countries. Australia will also provide food aid in response to emergency needs, bringing the total estimated provision for this form of assistance in 1985-86 to some \$45 million.

In 1984-85 \$24.459 million was made available (in addition to food aid) for emergency relief, \$2.948 million of this was for disaster victims and the remaining \$21.511 million was for refugees and displaced people. Australia is currently the ninth largest contributor to the budget of the United Nations High Commissioner for Refugees.

### **Consular and passports**

The Department of Foreign Affairs is responsible to the Minister for the protection and welfare of Australian citizens and their interests overseas. Consular services to the Australian public are available from Australian diplomatic and consular posts throughout the world.

Australia's consular service continued to operate effectively and to cope with a greater volume of enquiries attributable to a continuing increase in Australian tourism abroad. In 1984-85, Australia's overseas posts dealt with over 100,000 requests for consular assistance, including 167 cases of Australians dying abroad and the arrest of 130 persons.

Policy developments during the past year included preliminary discussions towards the negotiation of consular agreements with several countries, and consideration of options for compensating persons (or their heirs) who were illegally interned as POW's in German concentration camps during World War 2.

The past year also marked the continuation of a determined effort by Australia to research and develop consular policies which will more clearly reflect Australian values, open government and Australia's commitment to the defence of its citizens' human rights.

These developments are largely in response to public expectations and recognition of the importance of an effective consular service.

Since 1 July 1984 all passport applicants have been required to lodge their applications in person, either at an official Post Office or at a Passports Office. This was the last of a series of measures to increase passport security introduced in response to recommendations of the Royal Commission of Inquiry into Drug Trafficking. In 1984, 669,119 passports were issued.

### **Australian representation overseas**

As at 31 July 1985, Australia maintained the following diplomatic and consular representation overseas (full details of these missions are available from the Department of Foreign Affairs, Canberra, A.C.T., 2600).

#### **Embassies**

Abu Dhabi; Albania (in Yugoslavia); Algeria; Argentina; Austria; Belgium; Bolivia; Brazil; Bulgaria (in Yugoslavia); Burma; Chile; China; Colombia (in Venezuela); Comoros (in Mauritius); Costa Rica (in Mexico); Czechoslovakia (in Poland); Denmark; Ecuador (in Venezuela); Egypt; El Salvador (in Mexico); Ethiopia; Finland (in Sweden); France; Gabon (in Nigeria); German Democratic Republic; Germany, Federal Republic of; Greece; Guatemala (in Mexico); Holy See; Honduras (in Mexico); Hungary; Iceland (in Denmark); Indonesia; Iran; Iraq; Ireland; Israel; Italy; Ivory Coast (in Switzerland); Japan; Jordan; Korea, Republic of; Kuwait; Laos; Lebanon; Luxembourg (in Belgium); Madagascar (in

Tanzania); Maldives, Republic of (in Sri Lanka); Mexico; Mongolia (in U.S.S.R.); Morocco (in France); Mozambique (in Zimbabwe); Nepal; Netherlands; Nicaragua (in Mexico); Norway (in Sweden); Oman (in Saudi Arabia); Pakistan; Panama (in Venezuela); Paraguay (in Argentina); Peru; Philippines; Poland; Portugal; Qatar (in Saudi Arabia); Romania (in Yugoslavia); Saudi Arabia; Senegal (in Switzerland); South Africa; Spain; Sudan (in Egypt); Sweden; Switzerland; Syria; Thailand; Tunisia (in Algeria); Turkey; Union of Soviet Socialist Republic; United Arab Emirates (in Saudi Arabia); United States of America; Uruguay (in Argentina); Venezuela; Vietnam; Yemen Arab Republic (in Saudi Arabia); Yemen, Peoples Democratic Republic of (in Saudi Arabia); Yugoslavia.

#### High Commissions

Antigua & Barbuda (in Jamaica); Bahamas (in Jamaica); Bangladesh; Barbados (in Jamaica); Belize (in Jamaica); Botswana (in Zimbabwe); Brunei; Canada; Cyprus; Dominica (in Jamaica); Fiji; Gambia (in Nigeria); Ghana (in Nigeria); Grenada (in Jamaica); Guyana (in Jamaica); India; Jamaica; Kenya; Kiribati; Lesotho (in South Africa); Malaysia; Malawi (in Zambia); Malta; Mauritius; Nauru; New Zealand; Nigeria; Papua New Guinea; St Lucia (in Jamaica); Seychelles (in Mauritius); Sierra Leone (in Nigeria); Singapore; Solomon Islands; Sri Lanka; Swaziland (in South Africa); Tanzania; Tonga; Trinidad and Tobago (in Jamaica); Tuvalu (in Fiji); Uganda (in Kenya); United Kingdom; Vanuatu; Western Samoa; Zambia; Zimbabwe.

#### Commissions

Hong Kong.

#### Other

*Mission to*—European Communities (Brussels); United Nations (New York); United Nations (Geneva); UNESCO (Paris); Organisation for Economic Co-operation and Development (Paris); United Nations Industrial Development Organisation (Vienna); UN Economic and Social Council for Asia and the Pacific (Bangkok); International Atomic Energy Agency (Vienna); Food and Agriculture Organisation (Rome); International Civil Aviation Organisation (Montreal).

*Consulate-General in*—Auckland; Bahrain; Bombay; Chicago; Houston; Honolulu; Jeddah; Los Angeles; Milan; New York; Noumea; Osaka; Rio de Janeiro; San Francisco; Shanghai; Toronto; Vancouver.

*Consulate in*—Bali; Edinburgh; Geneva; Manchester.

Specialist officers of the Department of Trade, other Australian Government Departments and the Defence Services stationed abroad are attached to Australian diplomatic or consular missions. Senior attached officers are in some cases accredited to the missions with diplomatic or consular ranks approved by the Minister for Foreign Affairs.

#### IN RETROSPECT.....Year Book No 49 (1963)

1. **The Department of External Affairs.**—The Australian Department of External Affairs was first set up in 1901, the year of federation. It dealt with United Kingdom relations, the administration of Papua, matters arising out of Australia's position in the Pacific, and immigration. The original department was abolished in 1916, and re-established in 1921 to deal with League of Nations matters, under the direction of the Secretary of the Prime Minister's Department, who was also Secretary for External Affairs. In 1935, External Affairs was separated from the Prime Minister's Department and became an independent Department, but Australia had no direct diplomatic representation in foreign countries until 1940.

## CHAPTER 6

### DEMOGRAPHY

The sources of the statistics in this chapter are population censuses, population surveys, State and Territorial registers of births, deaths and marriages, records of courts dealing with divorce, and other administrative records such as passenger cards required from international travellers and records of family allowance transfers.

With the proclamation of the *Constitution Alteration (Aboriginals) Act 1967* on 10 August 1967, the provision in Section 127 of the Constitution requiring the exclusion of Aboriginals in reckoning the numbers of the people of the Commonwealth or of a State or other part of the Commonwealth was repealed. Accordingly, population and vital statistics for all dates subsequent to 10 August 1967 no longer exclude full-blood Aboriginals. Also, estimates for periods back to 30 June 1961 have been revised to include Aboriginals.

### THE POPULATION

#### The population census

Basic enumerations of the population have been made since the early days of settlement in Australia. The early enumerations were known as 'musters'. A census conducted in New South Wales in 1828 became the first in a series of regular censuses in that colony. Periodic censuses were taken in the other Australian colonies. The first simultaneous censuses of all the Australian colonies were taken in 1881. The first national census was taken in 1911. It was followed by others in 1921, 1933, 1947, 1954, 1961 and at five yearly intervals thereafter. A special article on early censuses appears in Year Book No. 15 of 1922. A further article outlining the history, purposes, legal basis, organisation and publication of results of population censuses appears in Year Book No. 53 of 1967, pages 164-70, but note that the reference in that Year Book to the exclusion of Aboriginals from the census count has not applied since the repeal of the relevant provision of Section 127 of the Constitution (see above).

Every census from 1881 has inquired into age, sex, marital status, birthplace, nationality or citizenship, and occupation. A wide variety of other topics has been included from time to time.

The most recent census in Australia was conducted on 30 June 1981. Counts of persons and dwellings are available for every collection district and for other larger areas, as well as statistics on characteristics of persons and dwellings as collected in the census. 1981 Census statistics were released in publications, on microfiche and on magnetic tape. A list of 1981 Census publications is contained in *Census 81—Data Release Plans* (2142.0) and details of other releases are in *Catalogue of 1981 Census Tables, Edition 2* (2139.0).

The 1981 Census contained fewer questions than the 1976 Census. However, in addition to basic demographic topics mentioned above, questions were asked on such topics as previous residence, birthplace of parents, English language proficiency, Aboriginality, religious affiliation, school attendance, educational qualifications, income, employment, mode of travel to work and certain characteristics of dwellings.

As for previous censuses, foreign diplomatic personnel and their families were out of the scope of the census, as were all persons residing in diplomatic residences on census night.

While every effort is made to minimise undercounting in the census, some inevitably remains for various reasons (e.g. inadvertent omission of very young children, treatment of some dwellings as unoccupied when in fact they were occupied, and failure to find all dwellings). Refusal by householders to complete the census schedule is not a significant cause of undercounting. Since 1966, sample surveys have been taken soon after each census to discover the approximate extent of underenumeration and the effects on the census results of misstatement or nonreply to specific questions. Underenumeration of the population of Australia at the 1981 Census is estimated to have been 1.9 per cent. Estimated underenumeration of State and Territory populations ranged from 0.8 per cent in Tasmania to 5.0 per

cent in the Northern Territory. Underenumeration varies from location to location and for populations of different ages and other characteristics. These and similar problems are common to all population censuses.

### Population estimates

Population estimates by sex and State are calculated on a quarterly basis by updating estimates at census dates for subsequent births and deaths and for overseas and interstate migration. Age estimates as at 30 June each year are published by sex for each State and Territory. Small area population estimates down to the local government area level as well as estimates of the birthplaces of the population are also made annually. In addition, small area population estimates by age and sex at the local government area level were compiled for 30 June 1981.

The method of determining the base population at a census date has changed with the 1981 Census results becoming available. Estimates now reflect the usual residence of the population rather than the actual location in which people were counted at the census. At the Australia level this means that overseas visitors counted in the census are subtracted, the remaining population is adjusted for census underenumeration and an estimate of Australian residents temporarily overseas on census night is added. For the States this process involves an additional step which returns those people not at home on census night to their place of usual residence.

This change-over has enabled population estimates after the 1981 Census date to be compiled wholly according to place of usual residence, since components of population increase were already available on a usual residence basis. Estimated resident populations for the 1971 and 1976 Census dates have also been calculated and intercensal estimates have been revised accordingly.

As a result of the above adjustments, estimated resident populations at census dates differ from actual census counts. The figures for estimated resident populations (with actual location census counts shown in brackets) are: 13,067,300 (12,755,638) in 1971; 14,033,100 (13,548,448) in 1976; and 14,923,300 (14,576,330) in 1981.

### Size and growth of Australia's population

When Europeans first settled in Australia, the number of Aborigines living in the continent is believed to have numbered at least 300,000. The Aboriginal population suffered a drastic decline in numbers over the next 145 years so that by 1933 it is estimated to have totalled about 67,000. In 1981, however, nearly 145,000 Aborigines were counted in the census.

The overall population of Australia reached 1 million in 1858, 5 million in 1918, 10 million in 1959 and 15 million towards the end of 1981.

From 1861 natural increase has been the major element in population growth, and immigration the most variable. In the years 1861 to 1890, total growth on average exceeded 3 per cent a year and natural increase 2 per cent. The rate of natural increase declined during the last decade of the nineteenth century and the first decade of the twentieth century, and this, together with a near cessation of immigration during that period, reduced the rate of growth from 3.70 per cent in 1861-70 to 1.63 per cent in 1901-10.

The 1914-18 War was the dominating influence in the decade 1911-1920: during the war and immediate post-war years the birth rate rose and immigration was resumed. In the economic depression of the 1930s, however, natural increase fell to very low levels and immigration ceased; indeed, in some years, overseas departures exceeded arrivals.

With the outbreak of the 1939-45 War, Australia entered a new phase. The immediate effect of the war was to increase the number of marriages and births. The increasing births more than offset the rise in deaths due to war casualties and higher civilian death rates. Migration in these years was negligible.

The period 1947 to 1961 was marked by continued high natural increase and a resumption of immigration, the latter resulting in very high net gains in each of the four years 1949 to 1952.

Between 1961 and 1970, net migration continued at about the same level as in the previous decade, but there were declines in the crude birth rate and the rate of natural increase. The years from 1971 till 1980 were characterised by a reduced rate of natural increase due to a decline in the birth rate. In 1981, however, the crude birth rate rose for the first time since 1971, to 15.8 per 1,000 mean population (15.3 in 1980). This rate was maintained in 1982 and 1983 but preliminary figures for 1984 show a decline to 15.0 or 15.3



if allowance is made for a backlog of registrations in New South Wales. Net migration gain, moderate for most of the seventies, increased sharply during 1979, 1980 and 1981, following changes in migration intake targets and Australia's acceptance of a large number of Indo-Chinese refugees as settlers. However, numbers began to decline in 1982, and in 1983 and 1984 fell back to the level of the seventies.

The rate of population growth in 1981 was 1.63 per cent, the highest since 1971 (2.08 per cent). It has since declined to 1.23 in 1983, and the preliminary growth rate for 1984 is 1.19. The population estimates in the following table relate to the end of December. Estimates for the end of June are given in other tables in this chapter.

#### POPULATION AND COMPONENTS OF GROWTH

Period	Population at end of period (000) (a)	Average annual rate of growth (b) (per cent)		
		Natural increase	Net migration (c)	Total
1851-1860.	1,145.6			
1861-1870.	1,647.8	2.47	1.23	3.70
1871-1880.	2,231.5	2.07	1.01	3.08
1881-1890.	3,151.4	2.05	1.46	3.51
1891-1900.	3,765.3	1.73	0.07	1.80
1901-1910.	4,425.1	1.53	0.10	1.63
1911-1920.	5,411.3	1.60	0.43	2.03
1921-1930.	6,500.8	1.32	0.53	1.85
1931-1940.	7,077.6	0.79	0.06	0.85
1941-1950.	8,307.5	1.14	0.47	1.62
1951-1955.	9,311.8	1.38	0.93	2.31
1956-1960.	10,391.9	1.40	0.82	2.22
1961-1965.	11,505.4	(e) 1.27	(e) 0.71	(e) 1.98
1966-1970.	12,663.5	1.11	0.82	1.94
1971-1975.	13,968.9	(d) 1.07	(d) 0.49	(d) 1.56
1976-1980.	14,807.4	0.81	0.45	1.17
1976	14,110.1	0.82	0.24	1.01
1977	14,281.5	0.83	0.48	1.21
1978	14,430.8	0.81	0.33	1.05
1979	14,602.5	0.81	0.48	1.19
1980	14,807.4	0.80	0.69	1.40
1981	15,049.5	0.86	0.82	1.63
1982	15,276.8	0.83	0.67	1.51
1983	15,464.2	0.87	0.36	1.23
1984 <sub>p</sub>	15,648.9	0.82	0.37	1.19

(a) Excludes full-blood Aborigines prior to 1961. Estimated resident populations from 1971 onwards. (b) The average annual rates of population growth for periods greater than one year are calculated on the compound interest principle. The rates refer to the population at the beginning of the period. Discrepancies between the sum of the rate of growth due to natural increase and net migration and the rate of total growth are due to intercensal adjustments. (c) Prior to 30 June 1971, net migration includes discrepancies disclosed by the various censuses. From 30 June 1971, net migration is defined as the excess of overseas arrivals over overseas departures classified as permanent and long-term. From 30 June 1976, net migration consists of net permanent and long-term movement and an adjustment for category jumping, i.e. the net effect of changes in travel intentions which affect the categorization of movements. (d) The estimated resident population at 31 December 1970 used to compute rates of growth for the period 1971-1975 was 12,929,600. (e) The estimated population at 31 December 1960 used to compute rates of growth for the period 1961-65 was 10,430,600. This estimate includes Aborigines.

### Projections of the population

Projections of Australia's population have been made by the ABS using the component method in which a base population is brought forward year by year by applying assumptions about future levels of fertility, mortality and the characteristics of overseas migration.

The 1984 projections presented in the following table give a possible 2021 population in the range 22.0 million to 23.9 million.

Assumptions used in 1984 projection series—

**Base population:** The series are based on the preliminary estimated resident population of Australia at 30 June 1984.

**Fertility:** Two sets of fertility assumptions have been used.

At the national level, for both assumptions, the total fertility rate declines linearly from 1,932 births per 1,000 women in 1983 to 1,930 in the year 1989. Beyond 1989 the two assumptions diverge:

I—the total fertility rate established in 1989 is maintained for the remainder of the projection period,

II—the total fertility rate gradually moves from the 1989 level to 2,110 (the level required for natural replacement of the population under the current mortality situation) in 1995 and remains at that level for the rest of the projection period.

*Mortality:* Only one assumption for mortality has been used. For Australia, the States and Territories, the average Australian age-sex-specific mortality rates in 1981 to 1983 (assumed to represent the 1982 level) are used as a base. For each year to 1987, these mortality rates are reduced annually by constant age-specific percentage rates in line with recent trends. For the years 1988 to 1995, lower constant rates of decline are applied. The levels achieved in 1995 are then assumed to remain unchanged for the rest of the projection period.

*Overseas migration:* Two assumptions for overseas migration have been used. In the short term, to 1987, the net gain each year has been set at 50,000 (75,000 arrivals and 25,000 departures) for both assumptions. For the remainder of the projection period these assumptions are:

I—net gain of 75,000 (100,000 arrivals and 25,000 departures) annually.

II—net gain of 100,000 (130,000 arrivals and 30,000 departures) annually.

*Interstate migration:* Two assumptions for interstate migration have been used.

I—small net interstate flows annually, resulting from an absolute sum of 29,000 movers in 1984-85 and 26,000 movers every year thereafter.

II—large net interstate flows annually, resulting from an absolute sum of 42,000 movers in 1984-85, 49,000 movers in 1985-86 and 53,000 movers every year thereafter.

For each assumption the pattern of interstate movement follows that experienced in recent years.

#### Description of the series

Of the eight possible combinations of alternative assumptions only four have been selected for publication. The projections resulting from these four combinations (listed below) are called Series A, B, C and D. Each Series projects the population of the States, Territories and Australia to the year 2021. The following table shows the projected population for Australia from each Series at selected dates. Series A and B are identical at the total Australia level having differing interstate migration assumptions only. (For details see *Projections of the Populations of Australia, States and Territories 1984 to 2021 (3222.0)*)

Series	Assumption	Series	Assumption
A	Fertility I	C	Fertility I
	Mortality		Mortality
	Overseas migration I		Overseas migration II
	Interstate migration I		Interstate migration I
B	Fertility I	D	Fertility II
	Mortality		Mortality
	Overseas migration I		Overseas migration II
	Interstate migration II		Interstate migration II

## POPULATION: ACTUAL AND PROJECTED

('000)

At 30 June	Actual population (a)	Projected population			
		1984 Projections			
		At 30 June	Series A and B	Series C	Series D
1947	7,579.4	(b) 1984	15,543.6	15,543.6	15,543.6
1954	8,986.5	1985	15,725.6	15,725.6	15,725.6
1961	10,548.3	1986	15,909.4	15,909.4	15,909.4
1966	11,599.5	1987	16,094.7	16,094.7	16,094.7
1971	13,067.3	1988	16,306.4	16,331.7	16,331.7
1976	14,033.1	1989	16,517.7	16,568.7	16,568.7
1977	14,192.2	1990	16,728.2	16,805.4	16,807.3
1978	14,359.3	1991	16,937.7	17,041.6	17,049.3
1979	14,515.7	1996	17,962.4	18,206.0	18,302.8
1980	14,695.4	2001	18,917.4	19,309.7	19,530.4
1981	14,923.3	2006	19,773.8	20,322.6	20,666.5
1982	15,178.4	2011	20,561.1	21,274.5	21,746.0
1983	15,378.6	2016	21,314.3	22,200.4	22,819.8
1984	15,555.9	2021	22,029.1	23,095.1	23,902.5

(a) Prior to 1971 population figures are census counts. For 1971 and subsequent years figures shown are estimated resident populations. Figures prior to 1961 exclude full-blood Aboriginals. (b) Base population; preliminary estimated resident population.

Without further immigration, Series A, B, and C projections yield a population of 17.6 million by the year 2001 and of 18.6 million by the year 2021. The Series D projection, without immigration, gives populations of 17.8 million for 2001 and 19.3 million for 2021.

For all series, the annual rate of growth would eventually decrease as a consequence of the increasing crude death rate, the falling crude birth rate and the decreasing rate of net migration gain. The median age would continuously increase as a result of the population becoming older. This ageing of the population is also reflected in an increase in the crude death rate whilst age-specific mortality rates are projected to decrease.

## PROJECTED ANNUAL RATES OF GROWTH AND MEDIAN AGES (a) AUSTRALIA 1984 TO 2021

	Year ending 30 June	Series		
		A and B	Series C	Series D
Birth rate (b)	1984p	15.6	15.6	15.6
	1986	15.7	15.7	15.7
	1991	15.3	15.3	15.7
	1996	14.7	14.7	16.0
	2001	13.9	13.9	15.0
	2006	13.1	13.2	14.2
	2011	12.8	12.9	13.9
	2016	12.8	12.9	14.0
Death rate (b)	2021	12.7	12.8	14.1
	1984p	7.2	7.2	7.2
	1986	7.2	7.2	7.2
	1991	7.3	7.3	7.3
	1996	7.6	7.6	7.5
	2001	8.1	8.0	7.9
	2006	8.6	8.4	8.3
	2011	9.0	8.8	8.6
Rate of net migration gain (b)	2016	9.3	9.1	8.9
	2021	9.8	9.5	9.3
	1984p	2.3	2.3	2.3
	1986	3.2	3.2	3.2
	1991	4.5	5.9	5.9
	1996	4.2	5.5	5.5
	2001	4.0	5.2	5.2
	2006	3.8	4.9	4.9
2011	3.7	4.7	4.6	
2016	3.5	4.5	4.4	
2021	3.4	4.3	4.2	

For footnotes see end of table.

PROJECTED ANNUAL RATES OF GROWTH AND MEDIAN AGES (a) AUSTRALIA 1984 TO 2021  
(continued)

Year ending 30 June	Series		
	A and B	Series C	Series D
<b>Total rate of growth (per cent)</b>			
1984p . . . . .	1.1	1.1	1.1
1986. . . . .	1.2	1.2	1.2
1991. . . . .	1.2	1.4	1.4
1996. . . . .	1.1	1.3	1.4
2001. . . . .	1.0	1.1	1.2
2006. . . . .	0.8	1.0	1.1
2011. . . . .	0.8	0.9	1.0
2016. . . . .	0.7	0.8	1.0
2021. . . . .	0.6	0.8	0.9
<b>Median age (years)</b>			
1984p . . . . .	30.47	30.47	30.47
1986. . . . .	31.03	31.03	31.03
1991. . . . .	32.35	32.29	32.28
1996. . . . .	33.70	33.56	33.40
2001. . . . .	34.87	34.67	34.29
2006. . . . .	36.00	35.76	35.23
2011. . . . .	37.16	36.86	36.05
2016. . . . .	37.78	37.39	36.34
2021. . . . .	38.20	37.81	36.51

(a) The median age indicates the age at which one half of the population is younger and the other half older. (b) Rate per 1,000 mean population.

### Location of the population

For historical, climatic and economic reasons the population of Australia is concentrated in capital cities and other major cities, mainly on the south and east coasts of the continent. In June 1984, 70.5 per cent of the population lived in the national capital, the six State capital cities and Darwin, and five other major cities of 100,000 or more persons (as defined by capital city statistical divisions and statistical districts). Of these, only Canberra is located inland. The percentage of the population living in rural areas declined over the years as the major cities and towns attracted most of the population growth; there were periods when the rural population actually declined in numbers. This trend, however, slowed considerably after 1971 and between 1976 and 1981 it actually reversed, so that a higher percentage of the population was counted in rural areas at the 1981 Census (14.2 per cent) than at the 1976 Census (13.9 per cent). In 1984, New South Wales was the State with the highest per cent of the estimated resident population living in the capital city or towns of over 100,000 (75.0 per cent), followed by Victoria (74.4 per cent), South Australia (72.4 per cent), Western Australia (71.1 per cent), Queensland (56.7 per cent) and Tasmania (40.2 per cent). In the Northern Territory, 47.6 per cent of the estimated resident population lived in the capital city.

#### ESTIMATED RESIDENT POPULATION IN CAPITAL CITIES AND OTHER MAJOR CITIES (a)

	('000)		
	30 June 1976	30 June 1981	30 June 1984
Sydney . . . . .	3,143.8	3,279.5	3,358.6
Melbourne . . . . .	2,723.7	2,806.3	2,890.7
Brisbane . . . . .	1,000.9	1,096.2	1,146.6
Adelaide. . . . .	924.1	952.7	979.6
Perth . . . . .	832.8	922.0	983.4
Hobart . . . . .	164.4	171.1	175.7
Darwin . . . . .	44.2	56.5	66.1
Canberra (b) . . . . .	226.5	246.5	264.4
Newcastle . . . . .	380.0	402.7	419.1
Wollongong . . . . .	222.3	231.4	235.9
Gold Coast (c) . . . . .	110.9	162.7	198.3
Geelong . . . . .	138.3	142.0	145.2
Townsville . . . . .	90.5	96.3	100.5
<b>Total . . . . .</b>	<b>10,002.4</b>	<b>10,565.9</b>	<b>10,964.2</b>
<b>Percentage of total population . . . . .</b>	<b>71.28</b>	<b>70.80</b>	<b>70.48</b>

(a) Capital city statistical divisions and statistical districts of 100,000 persons or more. (b) Includes Queanbeyan. (c) Includes Tweed Heads.

While there has been population growth in all States, between 30 June 1971 and 30 June 1984, there has been substantially higher than average growth in the States of Queensland (35.4 per cent), Western Australia (31.3 per cent), and the two Territories—the Northern Territory (62.0 per cent) and the Australian Capital Territory (61.8 per cent). During this time the total Australian population increased by 19.0 per cent.

## POPULATION OF STATES AND TERRITORIES (a)

('000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.(b)</i>	<i>Aust.</i>
5 April 1891 . . . . .	1,127.1	1,140.1	393.7	315.5	49.8	146.7	4.9	..	3,177.8
31 March 1901 . . . . .	1,354.8	1,201.1	498.1	358.3	184.1	172.5	4.8	..	3,773.8
3 April 1911 . . . . .	1,646.7	1,315.6	605.8	408.6	282.1	191.2	3.3	1.7	4,455.0
4 April 1921 . . . . .	2,100.4	1,531.3	756.0	495.2	332.7	213.8	3.9	2.6	5,435.7
30 June 1933 . . . . .	2,600.8	1,820.3	947.5	580.9	438.9	227.6	4.9	8.9	6,629.8
30 June 1947 . . . . .	2,984.8	2,054.7	1,106.4	646.1	502.5	257.1	10.9	16.9	7,579.4
30 June 1954 . . . . .	3,423.5	2,452.3	1,318.3	797.1	639.8	308.8	16.5	30.3	8,986.5
30 June 1961 . . . . .	3,918.5	2,930.4	1,527.5	971.5	746.8	350.3	44.5	58.8	10,548.3
30 June 1966 . . . . .	4,237.9	3,220.2	1,674.3	1,095.0	848.1	371.4	56.5	96.0	11,599.5
30 June 1971 . . . . .	4,725.5	3,601.4	1,851.5	1,200.1	1,053.8	398.1	85.7	151.2	13,067.3
30 June—									
1975 . . . . .	4,932.0	3,787.4	2,051.4	1,265.3	1,154.9	410.1	(c)92.9	199.0	13,893.0
1976 . . . . .	4,959.6	3,810.4	2,092.4	1,274.1	1,178.3	412.3	98.2	207.7	14,033.1
1977 . . . . .	5,001.9	3,837.4	2,129.8	1,286.1	1,204.4	415.0	103.9	213.7	14,192.2
1978 . . . . .	5,053.8	3,863.8	2,172.0	1,296.2	1,227.9	417.6	110.0	218.0	14,359.3
1979 . . . . .	5,111.1	3,886.4	2,214.8	1,301.1	1,246.6	420.8	114.1	220.8	14,515.7
1980 . . . . .	5,171.5	3,914.3	2,265.9	1,308.4	1,269.1	423.6	118.2	224.3	14,695.4
1981 . . . . .	5,234.9	3,946.9	2,345.2	1,318.8	1,300.1	427.2	122.6	227.6	14,923.3
1982 . . . . .	5,307.9	3,994.1	2,419.6	1,328.7	1,336.9	429.8	129.4	231.9	15,178.4
1983 . . . . .	5,360.4	4,037.6	2,471.6	1,341.5	1,364.5	432.6	133.9	236.6	15,378.6
1984 . . . . .	5,412.0	4,078.5	2,507.0	1,353.9	1,383.7	437.4	138.8	244.6	15,555.9
<b>Percentage of total population in 1984 . . . . .</b>	<b>34.79</b>	<b>26.22</b>	<b>16.12</b>	<b>8.70</b>	<b>8.90</b>	<b>2.81</b>	<b>0.99</b>	<b>1.57</b>	<b>100.00</b>

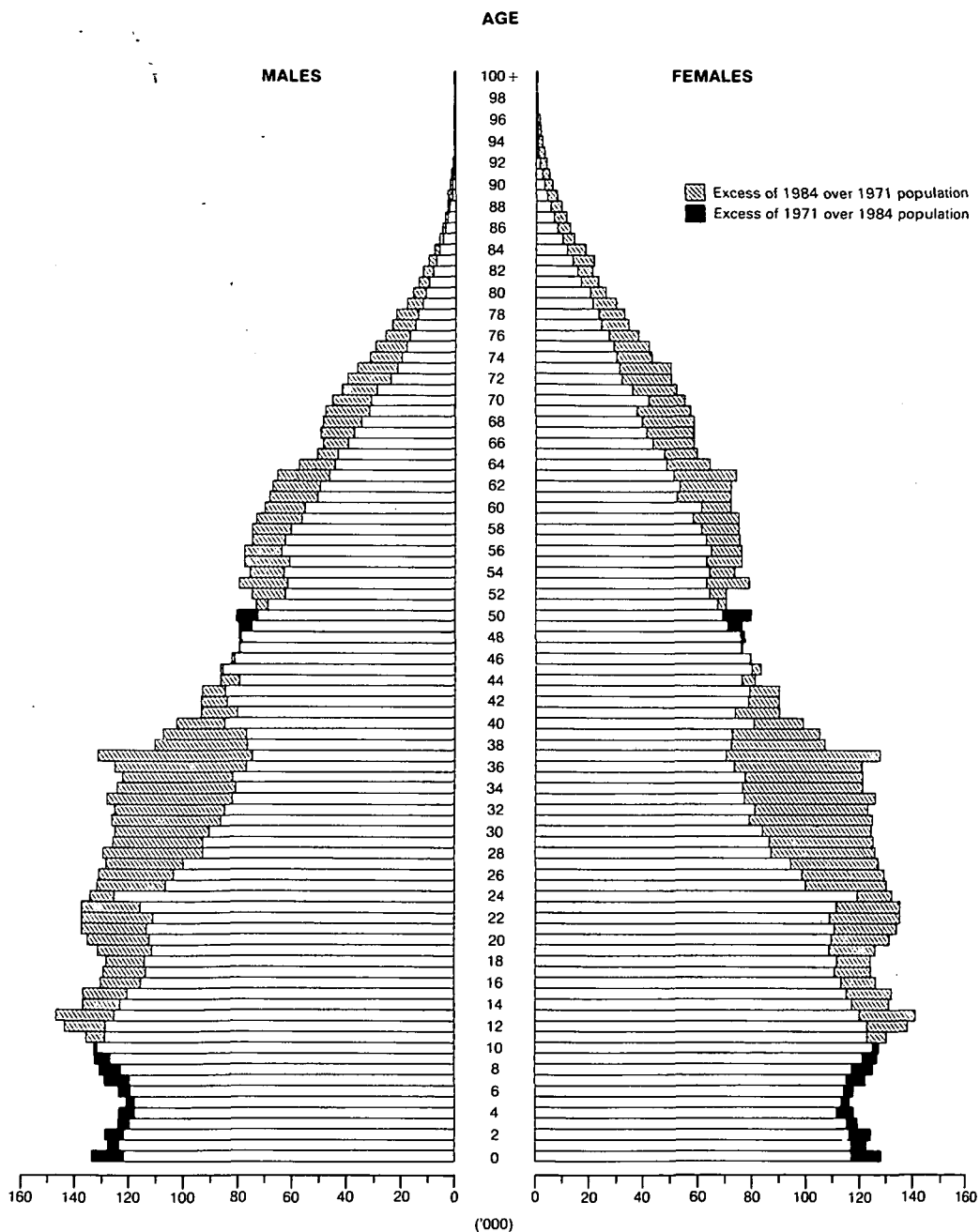
(a) Figures prior to 1961 exclude full-blood Aboriginals. The estimates from June 1971 for each State and Territory are estimated resident populations. Intercensal estimates incorporate adjustment to make each intercensal total increase agree with the difference between the estimated resident populations at two consecutive census points. (b) Part of New South Wales before 1911. (c) Decrease due to the effect of cyclone 'Tracy' on the Darwin population.

## Age distribution of the population

The age distribution of the population is shown in the form of an age-sex pyramid on the following page comparing the years 1971 and 1984. The low birth rates of the depression years of the 1930s, the prolonged "baby boom" from the end of World War II to the early 1960s, the declining birth rate of the 1970s and the recovery in the early 1980s in the birth rate are reflected in the profile.

## ESTIMATED RESIDENT POPULATION BY AGE: 30 JUNE 1984 ('000)

<i>Age group (years)</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
0-4 . . . . .	605.4	575.8	1,181.2
5-9 . . . . .	607.5	579.3	1,186.9
10-14 . . . . .	696.1	666.0	1,362.0
15-19 . . . . .	660.8	631.5	1,292.3
20-24 . . . . .	685.6	666.0	1,351.6
25-29 . . . . .	650.1	637.2	1,287.4
30-34 . . . . .	631.9	618.8	1,250.7
35-39 . . . . .	601.1	518.1	1,183.2
40-44 . . . . .	473.3	451.1	924.4
45-49 . . . . .	403.2	385.9	789.0
50-54 . . . . .	377.5	361.5	739.0
55-59 . . . . .	380.8	374.9	755.7
60-64 . . . . .	331.4	353.8	685.1
65-69 . . . . .	248.5	290.8	539.2
70+ . . . . .	408.0	620.1	1,028.1
<b>All ages . . . . .</b>	<b>7,761.2</b>	<b>7,794.7</b>	<b>15,555.9</b>



**ESTIMATED RESIDENT POPULATION OF AUSTRALIA:  
AGE LAST BIRTHDAY, BY SEX, 30 JUNE 1971 AND 1984**

**PLATE 15**

With a median age at 30 June 1984 of 30.5 years, Australia's population is younger than that in much of Europe. This is due to the higher rate of natural increase and the comparatively high proportion of immigrants in the population whose age profile is relatively young. Since the beginning of the 1970s, however, the median age has been rising. Lower birthrates have resulted in a declining proportion of the population aged 0-14 and, combined with lower mortality rates at most ages, an increasing proportion aged 65 and over.

## ESTIMATED RESIDENT POPULATION BY AGE GROUP: 1971 TO 1984

30 June	Number ('000)				Per cent				Median age (a) (years)
	Under 15	15-44	45-64	65 and over	Under 15	15-44	45-64	65 and over	
<b>MALES</b>									
1971	1,918.6	2,887.4	1,302.6	459.4	29.2	44.0	19.8	7.0	27.0
1976	1,940.6	3,158.2	1,407.8	525.5	27.6	44.9	20.0	7.5	27.9
1981	1,904.6	3,496.6	1,434.9	612.2	25.6	46.9	19.3	8.2	29.0
1982	1,914.9	3,581.6	1,450.6	629.2	25.3	47.3	19.1	8.3	29.2
1983	1,918.3	3,645.1	1,469.7	642.2	25.0	47.5	19.1	8.4	29.5
1984	1,909.0	3,702.9	1,492.9	656.4	24.6	47.7	19.2	8.5	29.8
<b>FEMALES</b>									
1971	1,828.7	2,734.2	1,305.5	631.0	28.1	42.1	20.1	9.7	28.1
1976	1,846.5	3,027.2	1,400.0	727.4	26.4	43.2	20.0	10.4	29.0
1981	1,821.0	3,382.1	1,429.1	842.8	24.4	45.2	19.1	11.3	30.2
1982	1,829.4	3,463.9	1,441.5	867.3	24.1	45.6	19.0	11.4	30.5
1983	1,830.5	3,527.5	1,456.6	888.7	23.8	45.8	18.9	11.5	30.8
1984	1,821.1	3,586.7	1,476.0	910.9	23.2	46.0	18.9	11.7	31.1
<b>PERSONS</b>									
1971	3,747.3	5,621.6	2,608.1	1,090.4	28.7	43.0	20.0	8.3	27.5
1976	3,787.1	6,185.4	2,807.8	1,252.8	27.0	44.1	20.0	8.9	28.4
1981	3,725.5	6,878.7	2,864.0	1,455.0	25.0	46.1	19.2	9.7	29.6
1982	3,744.3	7,045.5	2,892.1	1,496.5	24.7	46.4	19.1	9.9	29.9
1983	3,748.7	7,172.6	2,926.3	1,531.0	24.4	46.6	19.0	10.0	30.2
1984	3,730.1	7,289.6	2,968.9	1,567.4	24.0	46.8	19.1	10.1	30.5

(a) The median age is the age at which half the population is older and half is younger. Medians shown here are calculated from single age data.

**The labour force age group and dependency ratios**

The proportion of the population in the labour force age group (usually defined as the population aged 15-64) increased between 1971 and 1984 from 63.0 to 65.9 per cent of the population. The increase occurred wholly in the 15-44 year age group, offset by a marginal decline in the proportion aged 45-64.

As a consequence of changes in the age distribution, the old age-dependency ratio (population aged 65 and over per 100 population of working ages 15-64) has increased from 13.2 in 1971 to 15.3 in 1984, while the child-dependency ratio (population aged 0-14 per 100 population of working ages) has declined sharply from 45.5 to 36.4 during the same period. The combined effect is that the total dependency ratio has declined from 58.8 in 1971 to 51.6 in 1984.

## DEPENDENCY RATIOS (a): SELECTED YEARS 1971-84

	1971	1976	1981	1982	1983	1984
0-14 years	45.53	42.11	38.24	37.68	37.12	36.36
65 years and over	13.25	13.93	14.93	15.06	15.16	15.28
<b>Total</b>	<b>58.78</b>	<b>56.04</b>	<b>53.17</b>	<b>52.74</b>	<b>52.28</b>	<b>51.64</b>

(a) A dependency ratio is the ratio of the dependent population (aged 0-14 and 65 and over) per 100 population of working ages (15-64 years).

**Marital status**

At the 1981 Census the numbers of men and women aged 15 and over were nearly equal, but there were more single men than single women and there were more widows than widowers. The first phenomenon is attributable to women generally marrying about 2 years younger than men, and the second to their greater longevity. In 1981, 31.4 per cent of the male population aged 15 and over was single, 62.7 per cent married (including those who

were married but recorded as permanently separated), 2.5 per cent widowed and 3.4 per cent divorced. For females the figures were 23.2 per cent single, 61.7 per cent married (including married but permanently separated), 11.0 per cent widowed and 4.1 per cent divorced.

MARITAL STATUS OF THE POPULATION<sup>(a)</sup> 1971 TO 1981  
(Per cent distribution)

Census	Never married		Married (incl. permanently separated)	Widowed	Divorced	Total
	Under 15	15 and over				
MALES						
1971 . . . . .	29.2	21.0	46.7	2.0	1.0	100.0
1976 . . . . .	27.6	21.5	47.5	1.9	1.5	100.0
1981 . . . . .	25.6	23.4	46.7	1.9	2.5	100.0
FEMALES						
1971 . . . . .	28.1	15.0	47.5	8.2	1.1	100.0
1976 . . . . .	26.4	15.6	47.9	8.2	1.8	100.0
1981 . . . . .	24.4	17.5	46.7	8.3	3.1	100.0

(a) Census count, not adjusted for underenumeration.

### Sex ratios

The sex ratio of the population is expressed as the number of males per 100 females. This ratio varies by age: it is about 105.5 at birth, but higher male mortality gradually erodes the difference so that the numbers of males and females would tend to be about the same soon after age 50 in the absence of migration, and the sex ratio progressively declines thereafter with increasing ages. The overall sex ratio of the population has been declining to such an extent that it fell below 100 in 1979, the first time since World War I. In 1984 it was 99.6.

SEX RATIOS IN EACH AGE GROUP<sup>(a)</sup>  
(Males per hundred females)

30 June	Age in years				Total
	0-14	15-44	45-64	65 and over	
1971 . . . . .	104.9	105.6	99.8	72.8	101.1
1976 . . . . .	105.1	104.3	100.6	72.2	100.4
1981 . . . . .	104.6	103.4	100.4	72.6	99.6
1982 . . . . .	104.7	103.4	100.6	72.6	99.7
1983 . . . . .	104.8	103.3	100.9	72.3	99.6
1984 . . . . .	104.8	103.2	101.1	72.1	99.6

(a) Estimated resident populations.

### Birthplace of the population

The composition of the population has been changing gradually in post-war decades due to changes in both the numbers and the origins of immigrant flows.

The proportion of the population born overseas increased from 9.8 per cent at the 1947 Census to 21.1 per cent at 30 June 1984. The most common birthplace of overseas-born persons has always been the United Kingdom and Ireland, which in 1984 accounted for 7.7 per cent of the population. As a proportion of the overseas-born, however, it has declined from 72.7 per cent in 1947 to 36.9 per cent in 1984.



**ESTIMATED RESIDENT POPULATION BY BIRTHPLACE, 1981 TO 1984**  
(<sup>'000</sup>)

	30 June			
	1981	1982	1983	1984
Australia . . . . .	11,812.3	11,970.1	12,119.2	12,271.4
Africa . . . . .	94.4	99.5	103.4	106.2
America . . . . .	95.6	100.7	104.8	108.2
Asia (a)—				
India . . . . .	43.7	45.0	46.3	47.4
Lebanon . . . . .	52.7	53.9	54.6	56.3
Malaysia . . . . .	32.5	36.4	40.5	43.7
Vietnam . . . . .	43.4	54.5	63.1	72.5
Other . . . . .	213.2	230.8	246.0	261.6
Total Asia . . . . .	385.6	420.5	450.5	481.4
Europe—				
Germany (c) . . . . .	115.2	117.8	120.8	121.1
Greece . . . . .	153.2	154.3	154.1	154.1
Italy . . . . .	285.3	284.9	283.2	281.5
Malta . . . . .	59.9	60.5	60.3	60.2
Netherlands . . . . .	100.5	102.5	103.3	102.7
Poland . . . . .	62.1	66.9	69.8	70.1
UK and Ireland . . . . .	1,175.7	1,199.1	1,203.2	1,192.8
USSR . . . . .	53.3	52.7	51.8	50.9
Yugoslavia . . . . .	156.1	157.3	157.6	158.0
Other . . . . .	160.3	165.9	170.3	171.8
Total Europe . . . . .	2,321.6	2,361.8	2,374.4	2,363.1
Oceania (b)—				
New Zealand . . . . .	175.7	185.8	185.0	183.4
Other . . . . .	38.0	40.1	41.2	42.2
Total Oceania . . . . .	213.7	225.8	226.2	225.6
<b>Total</b> . . . . .	<b>14,923.3</b>	<b>15,178.4</b>	<b>15,378.6</b>	<b>15,555.9</b>

(a) Including countries which are frequently regarded as Middle East countries. This inclusion is based on United Nations classification of world regions. (b) Excluding Australian-born. (c) Includes German Federal Republic and German Democratic Republic.

**AUSTRALIAN AND OVERSEAS BORN POPULATION**

(Per cent)

30 June	Overseas born			Total
	Australian born	U.K. and Ireland	Other	
1947(a) . . . . .	90.2	7.1	2.7	100.0
1954(a) . . . . .	85.7	7.4	6.9	100.0
1961(a) . . . . .	83.1	7.2	9.7	100.0
1966(a) . . . . .	81.6	7.8	10.5	100.0
1971(a) . . . . .	79.8	8.5	11.7	100.0
1976(a) . . . . .	79.9	8.2	11.8	100.0
1981(b) . . . . .	79.2	7.9	12.9	100.0
1982(b) . . . . .	78.9	7.9	13.2	100.0
1983(b) . . . . .	78.8	7.8	13.4	100.0
1984(b) . . . . .	78.9	7.7	13.4	100.0

(a) Census counts, not adjusted for underenumeration. (b) Estimated resident population.

**The Aboriginal population**

A brief account was given of the Australian Aboriginal population, its origin and its numbers as estimated from time to time in Year Book No. 17, pages 951-61. A special article by A. R. Radcliffe Brown dealing with the estimated number and distribution of the Aboriginal population at the date of the first settlement of European people on the continent appeared in Year Book No. 23, pages 687-96. For a more recent comprehensive analysis, see "The Aboriginal Population of Australia" by L. R. Smith, ANU Press, Canberra 1980.

The task of collecting data on the Aboriginal population is difficult, raising problems of coverage, definition and reporting. For this reason, statistics, even of the total Aboriginal population, should be treated with caution. This applies particularly to comparison of the changes in numbers from one census to another which can be affected by social attitudes and

by changes made in the nature of the question in an attempt to improve coverage and reporting. Analysis of results of 1971, 1976 and 1981 Censuses indicated that in addition to possible higher than average undercoverage of Aboriginals in the censuses, errors in reporting Aboriginal origin also contributed to discrepancies in census counts of Aboriginals. For example, there is evidence of some overstatement of the number of Aboriginals and Torres Strait Islanders in the 1976 census. These issues are discussed in more detail in an ABS occasional paper, *An evaluation of census counts of the Aboriginal population, 1971, 1976 and 1981 Censuses* (No. 1985/2).

#### COUNTS OF ABORIGINALS AND TORRES STRAIT ISLANDERS (TSI) 30 JUNE 1971, 1976, 1981

State	1971(a) number			1976(b) number			1981(c) number		
	Aboriginal	TSI	Total	Aboriginal	TSI	Total	Aboriginal	TSI	Total
New South Wales . . . . .	23,101	772	23,873	37,688	2,763	40,451	33,414	1,953	35,367
Victoria . . . . .	5,656	715	6,371	12,415	2,345	14,760	5,283	774	6,057
Queensland . . . . .	24,414	7,508	31,922	31,948	9,396	41,344	33,966	10,732	44,698
South Australia . . . . .	7,140	159	7,299	9,940	774	10,714	9,476	349	9,825
Western Australia . . . . .	21,903	278	22,181	25,565	560	26,125	30,749	602	31,351
Tasmania . . . . .	575	96	671	2,522	421	2,943	2,334	354	2,688
Northern Territory . . . . .	23,253	128	23,381	23,535	215	23,750	28,680	408	29,088
Australian Capital Territory . . . . .	248	7	255	769	59	828	763	60	823
<b>Australia . . . . .</b>	<b>106,290</b>	<b>9,663</b>	<b>115,953</b>	<b>144,382</b>	<b>16,533</b>	<b>160,915</b>	<b>144,665</b>	<b>15,232</b>	<b>159,897</b>

(a) 1971 figures include a pro-rating of non-response. (b) Any discrepancies between totals and sums of components are due to sampling error. (c) Changed editing procedures adopted for 1981 Census results; see (2153.0) for details.

### Internal migration

The five-yearly censuses and annual internal migration surveys (conducted in conjunction with the labour force survey) are the principal sources of internal migration data. Estimates of interstate migration are also made from address changes notified to the Department of Social Security. For reasons of timing, methodology, coverage (the surveys for example do not direct questions to children under 15; children are assumed to have the same mobility characteristics as their parents or guardians) and other constraints, these three data series are not comparable.

#### Internal migration surveys

Internal migration surveys have been conducted at approximately annual intervals since 1970. The most recent was for the twelve months ended 30 June 1984. In these surveys, the place of usual residence of respondents is compared with that twelve months ago. If they differ, the respondent is classified as a mover. Estimates are made of the numbers and characteristics of movers and non-movers. Movers are further classified by place of origin and place of destination. (Because the estimates are based on information from occupants of a small sample of dwellings, the imprecision due to sampling variability should be kept in mind. Standard errors of estimates are published in the detailed publications providing the survey results).

Recent internal migration surveys show that about 16 per cent of all persons change their residence within a twelve-month period. Of those who change their residence, about 52 per cent remain within the same capital city and together with another 39 per cent, within the same State or Territory; slightly over 9 per cent are interstate movements.

While the pattern of migration has varied over the years, the age and sex composition of those who changed residence has been rather consistent: the sex ratio remains around 100 to 102 males per 100 females and mobility is highest in the 20-29 year age group (36 per cent of persons aged 20-24 and 31 per cent of persons aged 25-29 moved in the twelve-month period ended 30 June 1984).

## INTERNAL MIGRATION (a)

	Year ended—				
	30 June 1980	31 May 1981	30 June 1982	30 June 1983	30 June 1984 (b)
	('000)				
Changed usual residence—					
Intrastate—					
Within the same metropolitan area (c) . . .	1,180.6	1,205.4	1,111.3	1,198.0	1,326.1
To and from metropolitan areas (c) . . .	238.0	217.4	228.0	202.0	227.4
Within the same non-metropolitan area . . .	708.4	732.0	722.6	674.4	780.3
Total, intrastate . . . . .	2,127.0	2,154.7	2,061.8	2,074.4	2,333.8
Interstate . . . . .	250.2	266.0	287.1	219.2	214.3
Total . . . . .	2,377.3	2,420.7	2,348.9	2,293.9	2,548.2
Did not change usual residence . . . . .	11,817.3	11,974.0	12,262.0	12,618.2	12,584.1
Total . . . . .	14,194.6	14,394.7	14,610.9	14,912.0	15,132.3
	<i>Movers per thousand of population</i>				
Mobility rate . . . . .	167	168	161	154	168

(a) Non-institutionalised civilians who were resident in Australia at the beginning and end of the survey year. (b) Excludes persons resident in Australia but with no usual residence at the beginning and/or end of the survey year. (c) Metropolitan areas exclude Canberra and Darwin prior to 1983.

As well as enumerating persons who changed usual residence the 1984 internal migration survey collected data on the reasons for moving and other aspects of population mobility.

*Reasons for moving.* The predominant reason for moving given by persons aged 15 and over, particularly for intrastate movers, was housing. Of all intrastate movers 63 per cent gave housing as the main reason. The next most quoted reason—employment—accounted for only 16 per cent of intrastate moves. On the other hand employment emerged as the main reason for interstate moves. It accounted for 53 per cent of interstate moves, whilst housing only accounted for 10 per cent.

*Persons away from their usual residence*

The 1982 and 1983 surveys of internal migration gathered statistics on temporary stays away from the usual residence. A brief summary is given in Year Book No. 69, page 83.

*Duration at current usual residence.* Although the duration of stay at a person's place of usual residence is age-selective and, for the overseas-born, dependent on year of arrival in Australia, it can be used as a good indicator of internal migration over the long term. At 30 June 1984, 74 per cent of persons aged 15 and over had lived at their current usual residence for less than 15 years—that is they had moved at least once during the past 15 years. In the Northern Territory the figure was 95 per cent—higher than any other State or Territory. In the Australian Capital Territory it was 83 per cent, and in Western Australia, 81 per cent. Looking at the shorter term, 45 per cent of persons aged 15 and over had lived at their current usual residence for less than 5 years. The corresponding figure for the Northern Territory was 68 per cent, for Queensland 52 per cent and for Western Australia 50 per cent. The least mobile populations, both in the longer and shorter term, were in Tasmania and South Australia.

**DURATION OF STAY AT USUAL RESIDENCE OF 30 JUNE 1984**  
(Persons aged 15 and over) (a)  
(<sup>'000</sup>)

Duration of stay at usual residence of 30 June 1984	State of usual residence at 30 June 1984—								
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1-12 weeks (b) . . . . .	161.8	115.2	105.1	39.1	60.5	12.8	9.3	9.2	513.0
13-25 weeks (b) . . . . .	167.4	122.4	94.1	42.5	57.3	10.1	6.8	9.9	510.5
26-38 weeks (b) . . . . .	190.2	156.6	122.7	49.4	63.8	17.2	7.5	10.1	617.6
39-51 weeks (b) . . . . .	100.6	84.2	59.9	27.9	32.5	8.3	3.6	5.1	322.2
Total less than 1 year (b) . . . . .	620.0	478.4	381.8	159.0	214.1	48.3	27.2	34.3	1,963.2
1-4 years . . . . .	1,107.4	800.9	558.8	255.6	285.2	84.1	33.0	49.8	3,174.7
5-9 years . . . . .	706.3	560.8	285.3	165.1	192.9	58.0	18.9	35.1	2,022.3
10-14 years . . . . .	475.5	391.9	195.5	129.0	118.6	41.1	5.6	20.2	1,377.3
15-19 years . . . . .	420.2	306.5	144.5	112.0	71.4	34.7	2.3	15.0	1,106.5
20-24 years . . . . .	273.3	201.7	89.9	84.8	42.7	20.9	1.5	7.4	722.2
25 years or more . . . . .	433.8	316.9	165.2	120.6	73.3	34.6	*	6.4	1,151.3
Total . . . . .	4,036.4	3,057.1	1,821.0	1,025.9	998.1	321.8	88.9	168.3	11,517.5

(a) Non-institutionalised civilians with usual residence in Australia at 30 June 1983 and 30 June 1984. (b) Excludes 124,000 persons with a usual residence at 30 June 1984, but with no usual residence in Australia at 30 June 1983.

Asterisk (\*) denotes figure subject to sampling variability too high for most practical uses.

**Interstate migration**

The most reliable data on internal and interstate migration are provided by the five-yearly censuses. The 1971 Census was the first census which set out to measure internal migration by asking respondents where they usually lived and where they had lived 5 years before. An analysis of the data is given in the Census Monograph *Internal Migration in Australia*. In the 1976 and 1981 Censuses, respondents were asked where they had lived one year, as well as 5 years, before. A summary of the 1976 results is given in Year Book No. 65 and the 1981 results in Year Book No. 67. A comparison of data from the 1971, 1976 and 1981 Censuses is presented in *Interstate Migration, Australia, Census of Population and Housing, 30 June 1981 (3411.0)*.

**VITAL STATISTICS**

Registration of vital events, i.e. births, deaths and marriages, has been compulsory throughout Australia since 1856. The total number of these occurrences is available for each year since the 1860s and more detailed information since the 1910s. The number of divorces has been published since 1891, but other details have been published on a consistent basis only since the 1950s.

*Crude rates* are the number of vital events per thousand of the mean population of a particular year. *Natural increase* is the excess of births over deaths. In 1984, births numbered 234,034, deaths 109,914 and the natural increase was 124,120. The rate of natural increase for 1984 was 7.9 per thousand of the mean resident population made up of a crude birth rate of 15.0 and a crude death rate of 7.1. The 1984 figures for deaths and natural increase are preliminary.

**BIRTHS, DEATHS AND NATURAL INCREASE**

Period	Number			Crude rates per 1,000 of mean population		
	Births	Deaths	Natural increase	Births	Deaths	Natural increase
Annual averages—						
1961-65 . . . . .	232,952	95,465	137,487	21.3	8.7	12.6
1966-70 . . . . .	240,325	107,263	133,062	20.0	8.9	11.1
1971-75 . . . . .	253,438	111,217	142,221	18.8	8.3	10.6
1976-80 . . . . .	225,388	109,028	116,360	15.7	7.6	8.1
Annual totals—						
1979 . . . . .	223,129	106,568	116,561	15.4	7.3	8.0
1980 . . . . .	225,527	108,695	116,832	15.3	7.4	8.0
1981 . . . . .	235,842	109,003	126,839	15.8	7.3	8.5
1982 . . . . .	239,903	114,771	125,132	15.8	7.6	8.2
1983 . . . . .	242,570	110,084	132,486	15.8	7.2	8.6
1984(a) . . . . .	234,034	109,914	124,120	15.0	7.1	7.9

(a) The figures for 1984 have been affected by late registrations in N.S.W.

There were 108,655 marriages registered in 1984 and the crude marriage rate fell to 7.0 (late registrations in N.S.W. have affected these figures). Divorces numbered 43,012 and the crude divorce rate remained level at 2.8.

**MARRIAGE AND DIVORCE**

Period	Number		Crude rates per 1,000 of mean population	
	Marriages	Divorces	Marriage	Divorce
Annual averages—				
1961-65 . . . . .	83,250	7,568	7.6	0.7
1966-70 . . . . .	106,188	10,681	8.8	0.9
1971-75 . . . . .	111,803	17,348	8.3	1.3
1976-80 . . . . .	106,297	45,220	7.4	3.2
Annual totals—				
1979 . . . . .	104,396	37,854	7.2	2.6
1980 . . . . .	109,240	39,258	7.4	2.7
1981 . . . . .	113,905	41,412	7.6	2.8
1982 . . . . .	117,275	44,088	7.7	2.9
1983 . . . . .	114,860	43,525	7.5	2.8
1984 . . . . .	(a)108,655	43,012	(a)7.0	2.8

(a) The figures for 1984 have been affected by late registrations in N.S.W.

### Births and fertility

Special interest attaches to fertility as an element of population change. Fertility has had considerable impact on the population structure. In 1971, there was a record 276,362 births registered but the number of births declined progressively in each year until 1980, when a slight reversal of the trend occurred. This continued to 1983 when 242,570 births were registered, representing a 1.1 per cent increase from 1982, which followed a 1.7 per cent increase over 1981 and a 4.6 per cent increase of 1981 births over 1980. In 1984, 234,034 births were registered, however an estimated 4,438 births were not registered in N.S.W. The adjusted figure of 238,472 constitutes a decrease of 1.7 per cent over 1983 births.

#### Live births

Extensive statistics of live births are available since the 1910s. These include information about sex of children, the incidence of multiple births, marital status of the parents, the number of previous issue to the mother's existing marriage, the duration of marriage, the age of parents and their country of birth.

With rare exceptions, statistics indicate an excess of male over female births. In 1984, there were 119,816 male births and 114,218 female births, a sex ratio of 104.9.

The proportion of children born to parents not married to each other at the time of birth (i.e. ex-nuptial) has been increasing. In 1961-65, 5.9 per cent of births were ex-nuptial. There were 34,629 ex-nuptial births registered in 1984, 14.8 per cent of the total.

#### LIVE BIRTHS: SEX AND NUPTIALITY

Period	Live births				Ex-nuptial live births		
	Males	Females	Persons	Sex ratio	Persons	Sex ratio	Percentage of total
Annual averages—							
1961-65	119,777	113,175	232,952	105.8	13,798	106.9	5.9
1966-70	123,326	116,999	240,325	105.4	18,937	105.1	7.9
1971-75	130,047	123,389	253,436	105.4	24,516	106.7	9.7
1976-80	115,783	109,605	225,388	105.6	25,062	106.3	11.1
Annual totals—							
1979	114,613	108,516	223,129	105.6	26,110	103.9	11.7
1980	115,948	109,579	225,527	105.8	28,076	106.8	12.4
1981	121,170	114,672	235,842	105.7	31,200	107.5	13.2
1982	123,254	116,649	239,903	105.7	32,958	105.9	13.7
1983	124,558	118,012	242,570	105.5	35,646	106.2	14.7
1984(a)	119,816	114,218	234,034	104.9	34,629	104.8	14.8

(a) The figures for 1984 have been affected by late registrations in N.S.W.

About 1 per cent of confinements result in twin births and about one in 10,000 in triplets. Quadruplets occur about once in 250,000 confinements. The likelihood of multiple confinement is about 0.9 per cent for the first nuptial confinement, rising to about 1 per cent at the second confinement and to as much as 1.5 per cent at the fourth and subsequent confinements. The incidence of multiple births also rises with age of mother.

Since the 1950s, there has been a decline in the proportion, and since 1971 in the number, of women having three or more children to their marriage. During the 1950s and early 1960s the median age of mother at first nuptial birth declined, but in recent years it has risen. In 1984, median age at first birth was 26.0 years.

#### NUPTIAL CONFINEMENTS: BIRTH ORDER

Period	Birth order							Total nuptial (a)	Total ex-nuptial	Total confinements
	1	2	3	4	5	6	7 and over			
NUMBER OF CONFINEMENTS										
Annual averages—										
1961-65	69,281	57,971	40,818	23,612	12,125	6,160	6,862	216,829	13,655	230,483
1966-70	80,999	62,930	37,446	18,899	8,961	4,489	5,213	218,937	18,707	237,644
1971-75	88,120	74,641	36,914	15,216	6,006	2,805	2,959	226,674	24,299	250,973
1976-80	77,877	69,291	34,288	11,119	3,332	1,278	1,173	198,373	24,851	223,224
Annual totals—										
1979	77,032	67,250	34,387	11,100	3,124	1,140	1,050	195,084	25,884	220,968
1980	78,680	66,247	34,167	11,084	3,207	1,179	884	195,492	27,826	223,318
1981	82,476	67,627	35,445	11,750	3,282	1,113	880	202,579	30,956	233,535
1982	83,300	69,963	34,670	11,631	3,193	1,162	854	204,775	32,679	237,454
1983	83,466	70,427	34,081	11,343	3,108	1,059	819	204,779	35,335	240,114
1984(b)	79,295	69,312	33,027	10,802	3,013	1,064	761	197,306	34,337	231,643

For footnotes see end of table.

NUPTIAL CONFINEMENTS: BIRTH ORDER (continued)

Period	Birth order							Total nuptial (a)	Total ex-nuptial	Total confinements
	1	2	3	4	5	6	7 and over			
MEDIAN AGE OF MOTHER										
Annual averages—										
1961-65	23.1	25.7	28.3	30.6	32.5	33.9	35.0	26.5	22.5	26.4
1966-70	23.1	25.6	28.2	30.5	32.5	34.1	35.4	25.9	21.4	25.7
1971-75	23.6	26.0	28.2	30.6	32.5	34.1	36.8	25.9	21.1	25.6
1976-80	24.8	26.6	28.8	30.6	32.5	34.2	37.3	26.6	21.6	26.3
Annual totals—										
1979	25.1	26.8	28.9	30.7	32.4	34.2	36.8	26.9	21.6	26.5
1980	25.2	27.0	29.1	30.9	32.7	34.1	37.2	27.0	21.9	26.6
1981	25.3	27.2	29.2	30.9	32.6	34.4	36.9	27.1	22.1	26.7
1982	25.5	27.4	29.4	31.1	32.9	34.5	36.8	27.3	22.2	26.8
1983	25.7	27.5	29.4	32.1	32.8	34.3	36.6	27.4	22.5	26.9
1984(b)	26.0	27.6	29.6	31.1	32.9	34.5	36.9	27.6	22.8	27.1

(a) Includes those for whom birth order was not stated. (b) The figures for 1984 have been affected by late registrations in N.S.W.

Fertility

The general fertility rate, which is the number of births to women of any age per thousand females aged 15-44, is the simplest measure of fertility. The rates have been calculated for the three years' births around each census from 1881 and provide a consistent series for nuptial and ex-nuptial fertility as well as for total fertility.

The rates show a substantial decline in fertility over the total period with a low point in 1932-34 and a minor recovery, peaking in 1960-62. By 1980-82, however, the rates had again declined, this time to the lowest level recorded during the past 100 years. The 1980-82 general rate of 69 births per thousand females aged 15-44 was only 41 per cent of the rate in 1880-82.

FERTILITY RATES: AUSTRALIA

Period	Births per 1,000 women aged 15-44	Nuptial births per 1,000 married women aged 15-44	Ex-nuptial births per 1,000 single, widowed or divorced women aged 15-44	Index numbers (Base year 1900-02 = 100)		
				Births per 1,000 women aged 15-44	Nuptial births per 1,000 married women aged 15-44	Ex-nuptial births per 1,000 single, widowed or divorced women
1880-82	170	321	14	145	137	108
1890-92	159	332	16	136	141	123
1900-02	117	235	13	100	100	100
1910-12	117	236	13	100	100	100
1920-22	107	197	11	91	84	85
1932-34	71	131	7	61	56	54
1946-48	104	160	11	89	68	85
1953-55	109	149	14	93	63	108
1960-62	112	154	18	96	66	138
1965-67	95	132	21	81	56	162
1970-72(a)	97	131	28	83	56	215
1975-77(a)	76	104	22	65	44	169
1980-82(a)	69	99	23	59	42	177

(a) Rates expressed per 1,000 estimated resident women aged 15-44.

Age-specific birth rates provide a measure of changing patterns of fertility within the fertile ages. The sum of these rates is the total fertility rate. The total fertility rate represents the number of children a woman would bear in her lifetime if she experienced the rates of the year shown.

The total fertility rate was declining until 1980 but rose again in 1981, remained stable in 1982 and 1983, and has fallen again in 1984.

The continuing downward trend in the fertility of females aged 15-24 is currently being offset by increases for those aged 25-34.

## AGE-SPECIFIC BIRTH RATES(a)

Period	Age group (years)							Total fertility (b)
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
1961-65	46.5	204.0	207.2	122.4	59.2	18.7	1.2	3.289
1966-70	49.4	172.6	187.5	103.0	46.8	13.9	1.0	2.866
1971-75	48.0	154.0	166.9	85.0	33.7	9.1	0.6	2.484
1976-80	30.7	116.4	143.9	73.8	23.8	5.1	0.3	1.968
1977	32.1	122.0	145.7	74.1	23.9	5.0	0.3	2.016
1978	29.9	115.8	144.0	73.4	23.5	4.5	0.2	1.957
1979	28.5	109.2	142.5	73.9	23.6	4.6	0.3	1.913
1980	27.6	107.0	141.0	75.1	23.7	4.4	0.3	1.895
1981	28.2	107.5	145.2	77.6	24.5	4.5	0.3	1.938
1982	27.4	104.0	145.0	80.6	25.6	4.5	0.3	1.937
1983	26.5	102.7	146.1	81.5	25.0	4.3	0.2	1.932
1984(c)	23.2	94.2	140.8	81.4	24.9	4.3	0.3	1.846

(a) Number of births per 1,000 women in each age group. Excludes particulars of full-blooded Aboriginals before 1966. Rates from 1971 have been revised using estimated resident population introduced after the 1981 Census. (b) The sum of the age-specific rates multiplied by 5 and divided by 1,000. This is the number of children a woman would bear in her lifetime if she experienced the rates of the year shown. (c) The rates for 1984 have been affected by late registrations in N.S.W.

The *gross reproduction rate* is derived from total fertility and the ratio of female to total births. It indicates the number of female children who would be born on average to women supposing the rates from which it was calculated were to apply throughout the reproductive period. It is an indication of the extent to which the population is reproducing itself except that it does not allow for females who fail to survive to the end of the childbearing period. The *net reproduction rate* allows for such mortality. It is obtained by multiplying the age-specific rates by the survivor proportions in the corresponding age group of the stationary or life table population. A net reproduction rate of 1.0 represents the level of fertility required for the replacement of the population in the long term. Mortality in childhood and young adulthood is now so low that there is little difference between current gross and net reproduction rates.

## GROSS AND NET REPRODUCTION RATES

Period	Gross reproduction rate	Net reproduction rate	Life tables used
1961(a)	1.728	1.672	1960-62
1966	1.401	1.357	1965-67
1971	1.403	1.362	1970-72
1976	1.004	0.981	1975-77
1981	0.942	0.925	1980-82
1982	0.942	0.925	1982
1983	0.940	0.923	1983
1984(b)	0.901	0.885	1983

(a) Excludes particulars of full-blood Aboriginals. (b) The rates for 1984 have been affected by late registrations in N.S.W.

## Mortality

The number of deaths per year is in excess of 100,000. The increase from previous decades arises from the overall growth of the population, and from the advanced age of an increasing proportion of the population. The crude death rate, which fell from over 12 per 1,000 at the beginning of the century to 7.6 per 1,000 in 1982, can be expected to rise slowly as a result of further ageing of the population, unless there is a more than off-setting drop in age-specific death rates.

## General mortality

Between 1953-55 and 1960-62 mortality declined in every age group. Between 1960-62 and 1970-72 there were further declines in most age groups, particularly among infants. However, increases in mortality were recorded for males aged 15-24. Since 1970-72, there have been further decreases in mortality at most ages.

Mortality is greater for males than for females at every age. It is relatively high in the first year of life (10.3 per 1,000 males and 7.7 per 1,000 females in 1984), very low in childhood and young adulthood, and then rises in middle and old age.

AGE-SPECIFIC DEATH RATES(a)

Age group (years)	1956-60 (b)	1961-65 (b)	1966-70 (b)	1971-75 (b)	1976-80 (b)	1981	1982	1983	1984 (c)
<b>MALES</b>									
Under 1	24.0	22.0	21.0	18.4	13.6	11.5	11.8	10.5	10.3
1-4	1.3	1.1	1.0	0.9	0.7	0.6	0.7	0.6	0.6
5-9	0.6	0.5	0.5	0.4	0.3	0.3	0.4	0.3	0.2
10-14	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.3	0.3
15-19	1.4	1.2	1.4	1.5	1.4	1.2	1.3	1.1	1.0
20-24	1.8	1.7	1.8	1.7	1.7	1.5	1.6	1.5	1.5
25-29	1.5	1.5	1.5	1.3	1.4	1.3	1.4	1.4	1.1
30-34	1.8	1.7	1.6	1.4	1.3	1.2	1.3	1.2	1.3
35-39	2.3	2.4	2.4	2.1	1.9	1.7	1.6	1.4	1.4
40-44	3.5	3.7	3.8	3.4	3.0	2.6	2.5	2.3	2.4
45-49	5.9	6.2	6.2	6.0	5.2	4.5	4.5	3.9	3.7
50-54	10.0	10.3	10.4	9.6	8.6	7.9	7.5	7.2	6.6
55-59	16.9	16.8	17.2	15.9	13.8	12.9	12.7	12.3	11.6
60-64	26.6	27.4	27.8	25.5	22.2	19.8	20.0	19.0	18.6
65-69	42.0	42.2	44.3	39.3	35.3	32.3	33.1	30.7	29.3
70-74	63.5	64.7	67.0	61.2	54.2	52.0	52.0	47.9	47.6
75-79	97.5	97.2	102.7	95.3	84.7	80.2	82.8	77.3	74.1
80-84	145.0	145.0	149.2	141.2	127.9	121.1	124.8	116.9	114.0
85 and over	251.2	243.7	245.9	231.7	210.7	208.1	217.1	204.0	200.1
<b>FEMALES</b>									
Under 1	19.1	17.2	16.0	14.0	10.7	8.8	9.2	8.8	7.7
1-4	1.1	0.9	0.8	0.7	0.5	0.5	0.5	0.5	0.4
5-9	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2
10-14	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
15-19	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.4
20-24	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
25-29	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5
30-34	1.0	1.0	0.9	0.8	0.7	0.6	0.5	0.6	0.5
35-39	1.6	1.5	1.5	1.3	1.0	0.9	0.8	0.9	0.9
40-44	2.4	2.3	2.3	2.1	1.8	1.4	1.5	1.3	1.4
45-49	3.9	3.7	3.7	3.5	2.8	2.7	2.5	2.3	2.2
50-54	5.7	5.6	5.9	5.2	4.5	3.8	4.2	4.0	3.8
55-59	8.7	8.3	8.7	8.0	6.8	6.2	6.3	6.1	5.6
60-64	13.8	13.6	13.6	12.2	10.8	9.7	10.1	9.6	9.3
65-69	23.0	21.7	22.1	19.4	16.9	15.7	16.0	15.0	14.9
70-74	38.8	37.4	37.3	33.1	27.9	25.5	25.7	25.2	24.7
75-79	63.9	63.3	63.6	57.3	48.4	44.3	45.3	42.6	40.5
80-84	113.5	107.5	105.9	97.4	84.0	76.0	79.7	74.3	74.9
85 and over	215.6	205.1	201.0	187.9	168.4	160.4	171.2	156.0	155.4

(a) Number of deaths per 1,000 of population of the same age group and sex. (b) Average annual rate per 1,000 of population. (c) The rates for 1984 have been affected by late registrations in N.S.W.



## AGE AT DEATH, 1984(a)

Age at death (years)	Number			Per cent		
	Males	Females	Persons	Males	Females	Persons
Under 1 . . . . .	1,259	904	2,163	2.1	1.8	2.0
1-4 . . . . .	275	181	456	0.5	0.4	0.4
5-9 . . . . .	133	104	237	0.2	0.2	0.2
10-14 . . . . .	223	118	341	0.4	0.2	0.3
15-19 . . . . .	629	251	880	1.0	0.5	0.8
20-24 . . . . .	1,003	315	1,318	1.7	0.6	1.2
25-29 . . . . .	736	306	1,042	1.2	0.6	1.0
30-34 . . . . .	809	337	1,146	1.4	0.7	1.0
35-39 . . . . .	827	504	1,331	1.4	1.0	1.2
40-44 . . . . .	1,119	617	1,736	1.9	1.2	1.6
45-49 . . . . .	1,488	847	2,335	2.5	1.7	2.1
50-54 . . . . .	2,497	1,360	3,857	4.2	2.7	3.5
55-59 . . . . .	4,412	2,092	6,504	7.4	4.2	5.9
60-64 . . . . .	6,150	3,290	9,440	10.2	6.6	8.6
65-69 . . . . .	7,290	4,336	11,626	12.2	8.7	10.6
70-74 . . . . .	9,418	6,210	15,628	15.7	12.4	14.2
75-79 . . . . .	8,915	7,183	16,098	14.9	14.4	14.6
80-84 . . . . .	6,878	8,268	15,146	11.5	16.6	13.8
85-89 . . . . .	3,735	6,876	10,611	6.2	13.8	9.6
90-94 . . . . .	1,702	4,247	5,949	2.8	8.5	5.4
95-99 . . . . .	432	1,371	1,803	0.7	2.8	1.6
100 and over . . . . .	43	204	247	0.1	0.4	0.2
Not stated . . . . .	14	6	20	—	—	—
<b>Total.</b> . . . . .	<b>59,987</b>	<b>49,927</b>	<b>109,914</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) The figures for 1984 have been affected by late registrations in N.S.W.

## Life expectancy

The life table is a life history of a hypothetical group, or cohort, of people, as it is diminished gradually by deaths. They form the basis for the *stationary population* which is the population that would result from a constant number of births each year which had been subject at each age to the life table mortality rates.

Since 1921, official life tables have been calculated from the separate male and female populations as enumerated at the census, and the deaths of the three years around the census. Earlier life tables were compiled for decennial periods 1881-90, 1891-1900 and 1901-10. Life tables have also been prepared in recent years using annual age estimates and the deaths of a particular year.

A key value in life tables is the expectation of life remaining at each age. Expectation of life, particularly at birth, improved at every age in the first half of this century. Between 1953-55 and 1970-72 there was little change in expectation of life. However, since 1970-72 there have been significant improvements, particularly in expectation of life at birth which has increased between 1970-72 and 1984 from 68.1 years to 72.6 for males and from 74.8 years to 79.1 for females.

## COMPLETE EXPECTATION OF LIFE AT SELECTED AGES

Period	Expectation of life (a) at									
	Birth		1 year of age		20 years of age		40 years of age		60 years of age	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1901-10 (b)(c) . . . . .	55.2	58.8	60.0	62.9	44.7	47.5	28.6	31.5	14.4	16.2
1920-22 (b)(c) . . . . .	59.2	63.3	62.7	66.0	47.0	50.0	30.1	33.1	15.1	17.2
1932-34 (b)(c) . . . . .	63.5	67.1	65.5	68.7	48.8	51.7	31.1	34.0	15.6	17.7
1946-48 (b)(c) . . . . .	66.1	70.6	67.3	71.5	49.6	53.5	31.2	34.9	15.4	18.1
1953-55 (b)(c) . . . . .	67.1	72.8	67.9	73.5	50.1	55.1	31.7	36.0	15.5	18.8
1960-62 (b)(c) . . . . .	67.9	74.2	68.5	74.5	50.4	56.2	31.8	37.0	15.6	19.5
1965-67 (c) . . . . .	67.6	74.2	68.1	74.4	50.0	56.0	31.4	36.9	15.3	19.5
1970-72 (c) . . . . .	68.1	74.8	68.5	74.9	50.4	56.5	31.8	37.3	15.5	19.9
1975-77 (c) . . . . .	69.6	76.6	69.6	76.5	51.5	58.0	32.8	38.7	16.4	21.0
1980-82 (c) . . . . .	71.2	78.3	71.1	78.0	52.8	59.4	34.1	40.0	17.2	22.0
1983 (d) . . . . .	72.1	78.7	71.8	78.4	53.5	59.8	34.7	40.3	17.7	22.3
1984 (d) . . . . .	72.6	79.1	72.4	78.7	54.0	60.1	35.1	40.7	17.9	22.5

(a) The average number of additional years a person of a given age and sex might expect to live if the age-specific death rates of the given period continued throughout his/her lifetime. (b) Excludes particulars of full-blood Aboriginals prior to 1965-67. (c) Based on Official Life Tables calculated by the Australian Government Actuary. (d) Based on annual life tables calculated by the Australian Statistician. These tables are based on estimated resident populations.

## Marriages

Marriages in Australia are solemnised under Federal legislation, namely the *Marriage Act 1961* as amended. The original Act, which superseded State Acts, came into part operation on 6 May 1961. The first regulations and major provisions under the Act commenced on 1 September 1963.

Under the Act, marriages may be celebrated by Ministers of Religion registered as Authorised Celebrants, Registrars or other persons whose function is the registration of marriages, and other authorised civil and religious celebrants.

One month's written notice of intended marriage must be given to the Celebrant, though this may be shortened in special circumstances. Celebrants issue marriage certificates to the parties and transmit copies of the certificates to Registrars in the States or Territories in which the marriages took place.

The marriageable age under the Act is 18 for males and 16 for females. After inquiry, a Judge or Magistrate may authorise, in exceptional and unusual circumstances, the marriage of a person below marriageable age, but not below 16 for males and 14 for females.

Minors require, generally speaking, parental consent. A prescribed authority, usually a Registrar, may dispense with consent where such consent can be presumed and it would be unreasonable to require it. If parental consent is refused unreasonably, a Magistrate may give consent in lieu of the parent or guardian. Such a Magistrate's decision is subject to appeal. The age of majority was reduced in 1973 from 21 to 18. Because the marriageable age for males is also 18, the only persons of marriageable age requiring parental consent are now females between the ages of 16 and 18.

The Act makes provision, on a uniform basis, in respect of prohibited relations, other grounds for void marriages, legitimation, marriages overseas, and pre-marital education.

In 1984, 75.6 per cent of grooms and 76.7 per cent of brides were marrying for the first time; approximately 2.6 per cent were widowers and 3.0 per cent widows; and 21.8 per cent of grooms and 20.3 per cent of brides had been divorced. The proportion of marriages involving divorced persons increased sharply in 1976 and slightly thereafter. This is associated with the larger numbers of divorces granted since the introduction of the *Family Law Act 1975*.

Median age at first marriage declined during the 1950s and 1960s but has risen slightly in recent years. In 1984 it was 25.1 years for males and 22.9 for females. In 1984, 1.9 per cent of grooms and 10.8 per cent of brides married under the age of 20.

MARITAL STATUS AT MARRIAGE, 1961-1984

Period	Grooms				Total bride- grooms	Brides			
	Never married	Widowed	Divorced			Never married	Widowed	Divorced	Total brides
NUMBER									
Annual averages—									
1961-65 . . . . .	75,384	3,063	4,803	83,250	74,962	3,218	5,079	83,250	
1966-70 . . . . .	96,438	3,320	6,430	106,188	96,341	3,568	6,279	106,188	
1971-75 . . . . .	99,203	3,473	9,126	111,802	99,287	3,810	8,705	111,802	
1976-80 . . . . .	82,344	3,394	20,559	106,297	82,987	4,022	19,288	106,297	
Annual totals—									
1979 . . . . .	80,226	3,266	20,904	104,396	80,893	3,996	19,507	104,396	
1980 . . . . .	83,950	3,264	22,026	109,240	84,770	3,920	20,550	109,240	
1981 . . . . .	87,460	3,152	23,293	113,905	88,308	3,727	21,870	113,905	
1982 . . . . .	89,858	2,988	24,429	117,275	90,844	3,579	22,852	117,275	
1983 . . . . .	87,568	2,959	24,333	114,860	89,029	3,457	22,374	114,860	
1984(a) . . . . .	82,149	2,798	23,708	108,655	83,325	3,312	22,018	108,655	

For footnote see end of table.

## MARITAL STATUS AT MARRIAGE, 1961-1984 (continued)

Period	Grooms			Total bride- grooms	Brides			Total brides
	Never married	Widowed	Divorced		Never married	Widowed	Divorced	
<b>MEDIAN AGES</b>								
Annual averages—								
1961-65 . . . . .	24.2	56.6	40.4	24.7	21.3	49.2	36.6	21.7
1966-70 . . . . .	23.5	56.7	39.8	23.9	21.2	50.1	36.1	21.5
1971-75 . . . . .	23.3	57.8	37.3	23.9	21.0	51.1	33.0	21.4
1976-80 . . . . .	23.9	58.4	36.1	25.4	21.6	51.6	32.5	22.7
Annual totals—								
1979 . . . . .	24.1	58.6	36.1	25.6	21.7	52.3	32.6	22.9
1980 . . . . .	24.2	58.6	35.8	25.7	21.9	52.0	32.8	23.0
1981 . . . . .	24.4	59.1	36.0	25.9	22.1	52.1	32.9	23.3
1982 . . . . .	24.6	59.4	36.1	26.1	22.4	51.5	33.1	23.6
1983 . . . . .	24.9	59.7	36.5	26.4	22.7	52.3	33.4	23.9
1984(a) . . . . .	25.1	60.4	37.1	26.7	22.9	52.3	33.9	24.2

(a) The figures for 1984 have been affected by late registrations in N.S.W.

## AGE AT MARRIAGE, 1961-1984

Period	Age								Total
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50 and over	
<b>GROOM</b>									
Annual averages—									
1961-65 . . . . .	5,278	38,845	20,344	7,495	3,799	2,154	1,498	3,837	83,250
1966-70 . . . . .	7,917	55,824	23,398	7,008	3,544	2,473	1,763	4,258	106,185
1971-75 . . . . .	8,427	59,058	24,374	7,408	3,425	2,376	1,970	4,765	111,802
1976-80 . . . . .	4,830	45,796	26,139	11,245	5,500	3,512	2,822	6,452	106,297
Annual totals—									
1979 . . . . .	4,069	43,778	26,537	11,687	5,706	3,576	2,710	6,333	104,396
1980 . . . . .	3,943	45,519	28,256	12,785	5,928	3,690	2,737	6,382	109,240
1981 . . . . .	3,619	46,114	30,522	13,674	6,800	3,958	2,686	6,532	113,905
1982 . . . . .	3,288	45,811	32,336	14,751	7,605	4,347	2,823	6,314	117,275
1983 . . . . .	2,575	42,956	32,719	15,115	7,954	4,390	2,837	6,314	114,860
1984(a) . . . . .	2,046	38,347	32,051	14,670	8,048	4,449	2,913	6,131	108,655
<b>BRIDE</b>									
Annual averages—									
1961-65 . . . . .	23,454	39,370	8,760	3,553	2,416	1,715	1,367	2,616	83,250
1966-70 . . . . .	30,475	53,356	10,334	3,521	2,143	1,764	1,545	3,047	106,185
1971-75 . . . . .	34,319	51,846	12,363	4,280	2,279	1,733	1,621	3,362	111,802
1976-80 . . . . .	23,006	45,938	16,560	7,700	4,092	2,669	2,124	4,208	106,297
Annual totals—									
1979 . . . . .	20,382	46,029	16,974	7,873	4,225	2,803	1,950	4,160	104,396
1980 . . . . .	19,466	49,467	18,267	8,591	4,370	2,858	1,965	4,256	109,240
1981 . . . . .	18,769	51,769	20,039	9,354	4,871	3,053	1,992	4,058	113,905
1982 . . . . .	17,045	53,267	22,292	10,031	5,510	3,150	2,117	3,863	117,275
1983 . . . . .	14,119	52,631	23,066	10,310	5,596	3,209	2,118	3,811	114,860
1984(a) . . . . .	11,691	48,757	22,940	10,277	5,814	3,306	2,151	3,719	108,655

(a) The figures for 1984 have been affected by late registrations in N.S.W.

Marriage rates of the marriageable population provide a measure of changing marriage patterns. Marriage rates have been calculated for the three years around the census per thousand single, widowed and divorced males, females and persons aged 15 and over.

The rates for 1980-82 were 57.3 for males, 54.0 for females, and 55.6 for persons.

The proportion of all marriages celebrated by civil officers rose to 39.6 per cent of all marriages registered in 1984.

**Divorce**

The *Matrimonial Causes Act 1959-66* provided for dissolution of marriage on one or more of 14 grounds. It also provided for nullity of marriage and for judicial separation. This Act, which came into operation in 1961, replaced separate State and Territory legislation. The *Family Law Act 1975*, which came into operation on 5 January 1976, provides for a single ground for divorce—irretrievable breakdown of marriage—and for nullity of marriage on the ground that the marriage is void.

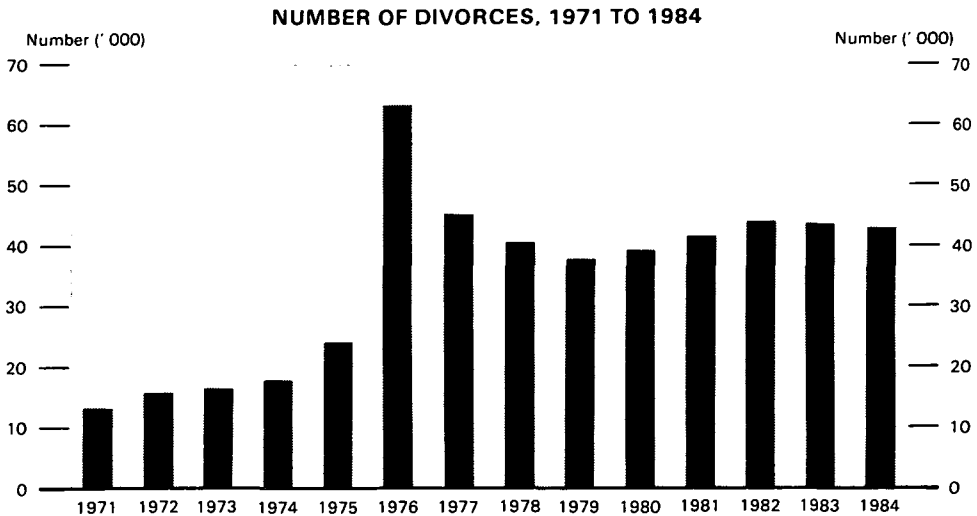
Statistics prior to 1976 in the following tables relate to divorces granted under the *Matrimonial Causes Act* or under previous State or Territory legislation.

When comparing the number and rate of decrees granted from year to year it should be borne in mind that the availability of judges to hear petitions lodged can affect the number of decrees granted. A rise in one year may be due wholly or in part to the clearing of a backlog of cases from an earlier year. In addition, changes to legislation, rules or practices may also affect the number of divorce applications.

Following a sharp rise in the number of divorces in 1976, the first year of Family Law legislation, the number dropped by 29 per cent to 45,150 in 1977. However, this number was still 86 per cent higher than the number granted in 1975 under *Matrimonial Causes* legislation.

**DIVORCES, AUSTRALIA, 1961-84**

<i>Period</i>	<i>Petitions filed</i>	<i>Petitions granted</i>
Annual averages—		
1961-65 . . . . .	9,956	7,568
1966-70 . . . . .	13,089	10,681
1971-75 . . . . .	22,704	17,348
1976-80 . . . . .	45,503	45,220
Annual totals—		
1979 . . . . .	37,393	37,854
1980 . . . . .	41,482	39,258
1981 . . . . .	43,520	41,412
1982 . . . . .	43,055	44,088
1983 . . . . .	42,569	43,525
1984 . . . . .	40,574	43,012



**PLATE 16**

**Duration of marriage, age at marriage and age at divorce**

The median duration of marriages dissolved in 1984 was 10.5 years. Of the 43,012 marriages which were dissolved, 47.8 per cent had lasted less than ten years, 33.3 per cent between ten and twenty years and 19.0 per cent twenty years or more.

**DIVORCE, YEARS MARRIED, 1961-1984**

Period	Years married						25 and over	Total	Median duration of marriage
	0-4	5-9	10-14	15-19	20-24				
Annual averages—									
1961-65 . . . . .	501	1,999	1,747	1,329	926	1,040	7,542	13.6	
1966-70 . . . . .	903	2,937	2,146	1,685	1,429	1,581	10,681	13.4	
1971-75 . . . . .	1,693	5,478	3,432	2,398	1,930	2,417	17,349	11.9	
1976-80 . . . . .	8,234	13,112	8,359	5,556	4,265	5,694	45,220	10.6	
Annual totals—									
1979 . . . . .	7,621	10,754	6,929	4,646	3,502	4,402	37,854	10.3	
1980 . . . . .	8,115	11,138	7,558	4,644	3,496	4,306	39,258	10.2	
1981 . . . . .	8,606	11,800	8,118	4,941	3,550	4,397	41,412	10.2	
1982 . . . . .	8,952	12,323	8,792	5,744	3,819	4,456	44,088	10.4	
1983 . . . . .	9,046	11,685	8,836	5,756	3,737	4,461	43,525	10.5	
1984 . . . . .	9,185	11,356	8,425	5,896	3,744	4,406	43,012	10.5	

In 1984, the median age at marriage of divorcing husbands was 23.9 years and of wives 21.3 years. Of husbands, 8.9 per cent had been aged under 20 at marriage and 50.7 per cent aged 20-24; of wives 33.4 per cent had been aged under 20 and 43.7 per cent between 20-24.

**DIVORCE, MEDIAN AGE AT MARRIAGE, 1961-1984**

Period	Median age at marriage of—	
	Husband	Wife
Annual averages—		
1966-70 . . . . .	24.2	21.7
1971-75 . . . . .	23.5	20.9
1976-80 . . . . .	23.4	20.8
Annual—		
1979 . . . . .	23.4	20.8
1980 . . . . .	23.4	20.9
1981 . . . . .	23.5	20.9
1982 . . . . .	23.6	21.0
1983 . . . . .	23.7	21.1
1984 . . . . .	23.9	21.3

At time of divorce, the median age of husbands was 36.3 years and of wives 34.1 years. A total of 21.4 per cent of husbands and 32.8 per cent of wives were aged under 30 when the marriage was dissolved.

**Children of the marriage****DISSOLUTION OF MARRIAGE, NUMBER OF CHILDREN, 1961-1984**

Period	Number of children of the marriage						Total dissolutions	Total number of children	Average number of children
	0	1	2	3	4	5 and over			
Annual averages—									
1961-65 . . . . .	2,834	1,950	1,611	753	279	143	7,568	9,347	1.2
1966-70 . . . . .	3,628	2,656	2,428	1,212	497	261	10,681	14,588	1.4
1971-75 . . . . .	5,628	4,062	4,200	2,147	874	438	17,349	24,840	1.4
1976-80 . . . . .	17,013	10,186	10,970	4,746	1,633	671	45,220	55,218	1.2
Annual totals—									
1979 . . . . .	14,641	8,167	9,488	3,876	1,243	439	37,854	46,130	1.2
1980 . . . . .	15,471	8,412	9,890	3,900	1,173	412	39,258	46,836	1.2
1981 . . . . .	16,127	8,898	10,621	4,141	1,231	394	41,412	49,616	1.2
1982 . . . . .	16,931	9,501	11,544	4,556	1,179	377	44,088	53,010	1.2
1983 . . . . .	16,697	9,469	11,422	4,439	1,189	309	43,525	52,059	1.2
1984 . . . . .	16,794	9,291	11,296	4,221	1,113	295	43,012	50,603	1.2

For the years in which the Matrimonial Causes Act was in force, children of the marriage were defined as living children under the age of 21 at the time of the petition. Under previous legislation there were differences between States. The Family Law Act defines them as children of the marriage if they were under the age of 18 at the time of application. In 1984, of the dissolutions granted under the Family Law Act, no children were involved in 39.0 per cent of the dissolutions, while 21.6 per cent of the dissolutions involved 1 child, 26.3 per cent 2 children, and 13.1 per cent 3 or more children.

## INTERNATIONAL MOVEMENTS

Statistics of overseas arrivals and departures are compiled from incoming and outgoing passenger cards which are collected from all travellers under the *Migration Act 1958*. Earlier statistics were obtained from passenger lists required under various Acts.

Since 1924, overseas travellers have been classified into two principal categories which distinguish movements for short terms from movements for longer periods (including permanent movements). Revised questions for travellers were introduced in 1958 and again in 1974. The 1958 revision enabled the separation, after 1959, of permanent from other long-term movements and also the identification of former settlers departing permanently. The 1974 revisions improved the classification without change of principle. The categories of overseas movement are:

*Permanent*—consists of persons arriving with the stated intention of settling permanently in Australia (settlers), and Australian residents (including former settlers) departing with the stated intention of residing permanently abroad. Before 1974, former settlers were not so classified unless they had spent at least 12 months in Australia.

*Long-term*—consists of overseas visitor arrivals and departures of Australian residents with the stated intention of staying in Australia or abroad respectively for 12 months or more; and departures of visitors and return of residents who have stayed in Australia or abroad respectively for 12 months or more. Until 1974, Australian residents returning were classified as long-term only if their time spent abroad included a period of 12 months in any one country. Their classification is now governed solely by their total absence from Australia.

*Short-term*—consists of overseas visitor arrivals and departures of Australian residents whose intended or actual period of stay in Australia or abroad respectively is less than 12 months.

The classification of overseas movements is based on statements made by the traveller on arrival in or departure from Australia. The statistics represent the travellers' intentions at the time of arrival or departure; travellers may subsequently change their intentions, and this must be borne in mind in interpreting the statistics.

An upsurge of international tourism, particularly by Australian residents, occurred in the 1970s. The volume of sea travel has changed little over the period (the figures exclude pleasure cruises in the south west Pacific beginning and ending in Australia), so that in 1983 less than one half of one per cent of arrivals and departures had travelled by ship. Net gains, i.e. the excess of total arrivals over total departures, until recently provided a satisfactory measure of the population gain from international migration. In recent years, however, distortions arising from seasonality of short-term arrivals and departures have become very large. For the purpose of estimating the population of Australia and the States and Territories, therefore, the migration component of population growth has been measured since 1 July 1971 by reference to permanent and long-term movements only.

## OVERSEAS ARRIVALS AND DEPARTURES: AUSTRALIA, 1961-1984

ARRIVALS									
Period	Permanent and long-term movement				Short-term movement(a)				
	Per- manent Settlers arriving	Long-term Australian residents	Overseas visitors	Total permanent and long-term arrivals	Overseas visitors				
					Australian residents	In transit	Other	Total	Total arrivals
	Annual averages—								
1961-65 . . .	115,200	22,260	14,770	152,230	117,000	28,700	102,800	131,500	400,700
1966-70 . . .	160,810	36,150	24,480	221,440	259,700	41,500	255,800	297,300	778,400
1971-75 . . .	109,690	57,750	26,250	193,690	631,400	74,400	401,600	475,900	1,301,100
1976-80 . . .	73,820	59,140	28,730	161,700	1,062,100	62,500	622,200	684,700	1,908,500
Annual totals—									
1979 . . .	72,240	61,440	33,450	167,130	1,144,300	68,300	725,000	793,300	2,104,800
1980 . . .	94,500	58,760	31,030	184,290	1,194,800	67,300	837,300	904,600	2,283,600
1981 . . .	118,740	59,400	34,550	212,690	1,181,400	62,800	874,000	936,700	2,330,800
1982 . . .	107,170	53,770	34,270	195,200	1,259,600	64,400	890,200	954,700	2,409,500
1983 . . .	78,390	47,810	27,380	153,570	1,219,600	62,300	881,600	943,900	2,317,100
1984 . . .	73,110	51,550	28,870	153,530	1,374,700	64,400	950,700	1,015,100	2,543,300

DEPARTURES									
Period	Permanent and long-term movement				Short-term movement(a)				
	Permanent		Total permanent and long-term departures	Long-term		Total permanent and long-term departures	Overseas visitors		
	Former settlers departing	Other residents departing		Australian residents	Overseas visitors		Australian residents	Overseas visitors	Total departures
	Annual averages—								
1961-65 . . .	9,700	6,800	16,500	37,910	12,720	67,120	118,600	135,000	320,700
1966-70 . . .	23,190	8,750	31,940	56,220	14,350	102,510	258,800	308,300	669,700
1971-75 . . .	26,620	12,030	38,650	66,430	22,980	128,070	647,600	479,000	1,254,700
1976-80 . . .	13,830	9,920	23,740	59,220	19,840	102,800	1,077,330	655,400	1,835,500
Annual totals—									
1979 . . .	12,670	10,750	23,420	54,270	20,420	98,110	1,175,800	752,400	2,026,300
1980 . . .	11,450	9,390	20,840	50,710	19,310	90,860	1,203,600	874,100	2,168,600
1981 . . .	11,280	8,580	19,860	46,740	19,020	85,610	1,217,300	900,400	2,203,300
1982 . . .	13,350	9,140	22,490	46,890	22,960	92,340	1,286,900	921,500	2,300,700
1983 . . .	16,920	8,950	25,870	48,180	26,450	100,510	1,253,000	928,900	2,282,400
1984 . . .	12,550	9,760	22,310	50,780	23,270	96,360	1,418,600	985,800	2,500,800

(a) Statistics of short-term movement since 1974 have been derived from a stratified sample of travellers and are subject to sampling error.

The total number of overseas arrivals and departures (excluding passengers on cruises which commence and complete their journeys in an Australian port) for the year 1984 was 5,044,100, 10 per cent more than for 1983.

New South Wales, with 52.5 per cent of clearances, remained the principal State of arrival and departure in 1984.

Short-term movements accounted for approximately 95 per cent of total movements in 1984.

Changes in the pattern and volume of short-term movements are shown in Chapter 26, under the heading 'Tourism'.

### Migration to Australia

Migration to Australia is regulated by the *Migration Act 1958* which came into force on 1 June 1959. Any person entering Australia after the commencement of the Act without having been granted an entry permit or who is not within an exempted class is a prohibited immigrant. Exempted persons include diplomatic and consular representatives of other countries, and seamen and air crew who enter with leave in Australian ports.

Immigration has contributed substantially to Australia's post-war population growth. In the post-war years, some 3.9 million migrants have arrived, of which it is estimated that more than 80 per cent settled.

Settler arrivals in 1984 totalled 73,110, a decrease of 7.0 per cent from the total for the previous year.

Settlers born in Asia became the major source, contributing 48 per cent of the overall settler intake. This was primarily due to the large contribution from East and South East Asia (30 per cent of the total). The number of European born settlers was 21,070 which constituted 29 per cent of settler arrivals. New Zealand born settlers were the third largest group, after Europe, with 6,860 settlers, 9 per cent of the total.

PERMANENT ARRIVALS (SETTLERS) BY COUNTRY OF BIRTH, AUSTRALIA

	Number		Per cent	
	1974	1984	1974	1984
South Africa . . . . .	1,590	1,360	1.3	1.9
Other Africa . . . . .	1,910	1,930	1.6	2.6
<i>Total Africa</i> . . . . .	<i>3,500</i>	<i>3,290</i>	<i>2.9</i>	<i>4.5</i>
Canada . . . . .	2,230	800	1.8	1.1
Chile . . . . .	2,380	1,260	2.0	1.7
U.S.A. . . . .	3,880	1,530	3.2	2.1
Other America . . . . .	6,990	1,990	5.8	2.7
<i>Total America</i> . . . . .	<i>15,470</i>	<i>5,580</i>	<i>12.8</i>	<i>7.6</i>
Bangladesh, India, Pakistan and Sri Lanka . . . . .	3,550	4,490	2.9	6.1
China . . . . .	n.a.	2,600	n.a.	3.6
Hong Kong . . . . .	1,490	3,070	1.2	4.2
Indonesia . . . . .	140	640	0.1	0.9
Lebanon . . . . .	3,180	2,440	2.6	3.3
Malaysia and Singapore . . . . .	1,970	2,540	1.6	3.5
Philippines . . . . .	760	2,950	0.6	4.0
Thailand . . . . .	n.a.	330	n.a.	0.5
Turkey . . . . .	3,000	740	2.5	1.0
Vietnam . . . . .	n.a.	9,900	n.a.	13.5
Other Asia . . . . .	3,220	5,050	2.7	6.9
<i>Total Asia (a)</i> . . . . .	<i>17,290</i>	<i>34,750</i>	<i>14.3</i>	<i>47.5</i>
U.K. and Ireland . . . . .	53,820	11,740	44.4	16.1
Austria . . . . .	1,340	120	1.1	0.2
Germany . . . . .	2,030	1,140	1.7	1.6
Greece . . . . .	3,730	650	3.1	0.9
Italy . . . . .	2,940	510	2.4	0.7
Yugoslavia . . . . .	5,380	1,310	4.4	1.8
Other Europe . . . . .	9,370	5,600	7.7	7.7
<i>Total Europe</i> . . . . .	<i>78,610</i>	<i>21,070</i>	<i>64.8</i>	<i>28.8</i>
New Zealand . . . . .	4,180	6,860	3.4	9.4
Other Oceania . . . . .	1,550	1,560	1.3	2.1
<i>Total Oceania</i> . . . . .	<i>5,730</i>	<i>8,420</i>	<i>4.7</i>	<i>11.5</i>
Not Stated . . . . .	720	—	0.6	—
<b>Total</b> . . . . .	<b>121,320</b>	<b>73,110</b>	<b>100.0</b>	<b>100.0</b>

(a) Asia includes countries which are frequently regarded as 'Middle East' countries, for example Iraq, Lebanon, Syria, etc. This inclusion is based on United Nations' classification of world regions.

Each year Australia loses a proportion of its previous migrant intakes. Additionally, partly as a result of the high international mobility of professional and skilled workers, substantial numbers of Australians take up job opportunities overseas.

Eligibility for entry for settlement is restricted to certain family members and fiancées/fiances of Australian residents, to others who possess skills, qualifications, personal or other qualities which represent an economic, social or cultural gain to Australia, and to refugees.



## DEMOGRAPHY

## SETTLER ARRIVALS

<i>Period</i>	<i>Assisted</i>	<i>Unassisted</i>	<i>Total</i>
<b>Annual averages—</b>			
1966-70 . . . . .	107,500	53,320	160,810
1971-75 . . . . .	58,180	51,510	109,690
1976-80 . . . . .	19,660	54,160	73,820
<b>Annual totals—</b>			
1979 . . . . .	19,060	53,170	72,240
1980 . . . . .	26,320	68,180	94,500
1981 . . . . .	29,960	88,780	118,730
1982 . . . . .	20,200	86,970	107,170
1983 . . . . .	12,130	66,270	78,390
1984 . . . . .	—	73,110	73,110

## SETTLER ARRIVALS BY AGE

<i>Period</i>	<i>Age in years</i>						<i>All ages</i>
	<i>0-4</i>	<i>5-14</i>	<i>15-24</i>	<i>25-44</i>	<i>45-64</i>	<i>65 and over</i>	
<b>MALES</b>							
<b>Annual averages—</b>							
1966-70 . . . . .	10,540	15,430	21,180	32,270	5,810	1,240	86,480
1971-75 . . . . .	7,410	10,010	12,880	20,330	3,920	1,250	55,790
1976-80 . . . . .	4,940	7,150	7,710	12,670	2,970	1,390	36,830
<b>Annual totals—</b>							
1979 . . . . .	4,990	6,840	7,600	12,210	2,870	1,340	35,840
1980 . . . . .	5,950	9,400	10,130	17,820	3,520	1,680	48,500
1981 . . . . .	7,550	12,060	13,100	23,160	4,200	1,790	61,870
1982 . . . . .	6,980	10,960	10,000	21,860	3,790	1,780	55,370
1983 . . . . .	5,220	7,410	6,960	15,330	3,230	1,700	39,830
1984 . . . . .	4,050	6,700	6,490	13,420	3,310	1,560	35,530
<b>FEMALES</b>							
<b>Annual averages—</b>							
1966-70 . . . . .	9,910	14,440	17,750	24,130	6,240	1,860	74,330
1971-75 . . . . .	6,950	9,300	13,690	17,450	4,790	1,730	53,900
1976-80 . . . . .	4,640	6,390	8,110	12,170	3,890	1,810	37,000
<b>Annual totals—</b>							
1979 . . . . .	4,620	6,060	8,440	11,870	3,610	1,800	36,400
1980 . . . . .	5,590	8,330	9,900	15,830	4,200	2,150	46,010
1981 . . . . .	7,070	10,620	11,650	20,840	4,540	2,150	56,870
1982 . . . . .	6,380	9,430	9,800	19,950	4,200	2,060	51,800
1983 . . . . .	4,730	6,360	7,130	14,390	3,960	2,010	38,560
1984 . . . . .	4,060	6,190	7,040	13,980	4,340	1,980	37,580
<b>PERSONS</b>							
<b>Annual averages—</b>							
1966-70 . . . . .	20,450	29,870	38,940	56,410	12,050	3,100	160,810
1971-75 . . . . .	14,360	19,310	26,560	37,770	8,710	2,970	109,690
1976-80 . . . . .	9,580	13,550	15,810	24,840	6,860	3,190	73,820
<b>Annual totals—</b>							
1979 . . . . .	9,610	12,900	16,040	24,080	6,480	3,140	72,240
1980 . . . . .	11,540	17,740	20,030	33,650	7,720	3,830	94,500
1981 . . . . .	14,630	22,680	24,760	44,000	8,740	3,930	118,740
1982 . . . . .	13,360	20,380	19,800	41,810	7,980	3,840	107,170
1983 . . . . .	9,950	13,760	14,090	29,710	7,180	3,710	78,390
1984 . . . . .	8,110	12,900	13,530	27,390	7,650	3,520	73,110

## SETTLER ARRIVALS BY MARITAL STATUS

Period	Never married		Married	Widowed and divorced	Total
	Under 15 years	15 years and over			
MALES					
Annual averages—					
1966-70 . . . . .	25,980	25,740	33,670	1,100	86,480
1971-75 . . . . .	17,420	14,750	22,600	1,030	55,790
1976-80 . . . . .	12,100	9,050	14,770	910	36,830
Annual totals—					
1979 . . . . .	11,820	8,450	14,560	1,010	35,840
1980 . . . . .	15,340	12,020	19,760	1,370	48,500
1981 . . . . .	19,600	15,160	25,640	1,470	61,870
1982 . . . . .	17,910	12,180	23,960	1,320	55,370
1983 . . . . .	12,620	9,250	16,890	1,070	39,830
1984 . . . . .	10,730	9,290	14,500	990	35,530
FEMALES					
Annual averages—					
1966-70 . . . . .	24,340	12,530	34,130	3,330	74,330
1971-75 . . . . .	16,250	9,750	25,060	2,840	53,900
1976-80 . . . . .	11,010	6,440	17,040	2,510	37,000
Annual totals—					
1979 . . . . .	10,670	6,610	16,520	2,600	36,400
1980 . . . . .	13,910	7,820	20,990	3,290	46,010
1981 . . . . .	17,630	9,250	26,770	3,220	56,870
1982 . . . . .	15,750	7,940	25,290	2,820	51,800
1983 . . . . .	11,040	6,230	18,390	2,900	38,560
1984 . . . . .	10,140	7,070	17,520	2,840	37,580
PERSONS					
Annual averages—					
1966-70 . . . . .	50,320	38,270	67,790	4,430	160,810
1971-75 . . . . .	33,670	24,500	47,660	3,870	109,690
1976-80 . . . . .	23,100	15,490	31,810	3,420	73,820
Annual totals—					
1979 . . . . .	22,490	15,060	31,080	3,610	72,240
1980 . . . . .	29,260	19,830	40,750	4,660	94,500
1981 . . . . .	37,230	24,410	52,410	4,690	118,740
1982 . . . . .	33,660	20,120	49,250	4,140	107,170
1983 . . . . .	23,650	15,490	35,280	3,970	78,390
1984 . . . . .	20,870	16,410	32,020	3,840	73,110

### Language

In May 1983 the ABS conducted a survey throughout Australia of persons aged 15 and over to obtain details of the languages they first spoke, their current usage of these languages and their understanding and usage of later acquired languages. Questions were also asked of the acquisition and use of English by persons whose first language spoken was a non-English language.

More detailed information was published in the 1985 Australia Year Book and is also available from the ABS publications *Language Survey, Australia, May 1983* (4503.0) and *Language in Australia* (4504.0).

### Refugees

Australia accepted 15,761 people under refugee and special humanitarian programs in 1984. This compared with an intake of 17,016 in 1983.

Since 1945, Australia has accepted more than 420,000 refugees or displaced persons, including 170,000 from Europe who were displaced by the Second World War and its aftermath.

Australia presently accepts refugees from about 40 countries. The largest element in Australia's current refugee intake is the Indo-Chinese program. In 1984, 8,537 Indo-Chinese refugees were resettled in Australia.

Australia is one of 97 countries which have become party to an international convention and protocol on the status of refugees and, in so doing, have taken on certain international

legal obligations to assist refugees. The final determination of a refugee's status and the decision to accept those refugees for resettlement in Australia rests with the Australian Government. Australia is also a member of the Executive Committee of the United Nations High Commission for Refugees (UNHCR). Australia's response to refugee situations is two-fold. Through aid programs directed principally through UNHCR, refugees are offered protection and assistance in countries of first refuge. Those refugees for whom other durable solutions are not feasible may be offered resettlement (in Australia) if they have relatives in Australia, other close ties with Australia or the potential for successful settlement in their own right. Such refugees must also be presented to Australia by the UNHCR as being registered or otherwise eligible for resettlement.

## REFUGEE ARRIVALS(a)

<i>Period</i>	<i>Assisted</i>	<i>Other</i>	<i>Total</i>
Annual averages—			
1961-65 . . . . .	1,799	n.a.	n.a.
1966-70 . . . . .	7,446	n.a.	n.a.
1971-75 . . . . .	2,773	7,776	10,549
1976-80 . . . . .	9,274	3,284	12,558
Annual totals—			
1979 . . . . .	14,639	2,418	17,057
1980 . . . . .	19,875	1,817	21,692
1981 . . . . .	19,055	2,917	21,972
1982 . . . . .	16,467	1,055	17,522
1983 . . . . .	16,194	822	17,016
1984 . . . . .	12,087	3,674	15,761

(a) Includes arrivals under the Special Humanitarian Program instituted late in 1981.

### Citizenship

The grant of citizenship is controlled by the *Australian Citizenship Act 1948*. Citizenship may be acquired by birth in Australia, by descent (birth abroad to an Australian parent), by grant of citizenship to persons resident in Australia under conditions prescribed in the Act, or by adoption for children aged under 18 who were not Australian citizens and were adopted on or after 22 October 1984.

All persons are now eligible for the grant of Australian citizenship provided that they have resided in Australia for at least two years, are of good character, have a basic knowledge of English and of the responsibilities and privileges of citizenship, and intend to reside permanently in Australia.

### PERSONS GRANTED AUSTRALIAN CITIZENSHIP

<i>Period</i>	<i>Number</i>
Annual averages—	
1961-65 . . . . .	43,823
1966-70 . . . . .	40,934
1971-75 . . . . .	61,182
1976-80 . . . . .	75,138
Annual totals—	
1978 . . . . .	65,094
1979 . . . . .	53,555
1980 . . . . .	68,145
1981 . . . . .	56,459
1982 . . . . .	75,047
1983 . . . . .	101,900

**BIBLIOGRAPHY****ABS Publications**

- 1976 Census publications including: Population of States and Territories Adjusted for Under-Enumeration as Shown by Post-Enumeration Survey (2212.0); Summary of Population and Dwelling Characteristics: States, Territories and Australia (2409.0 to 2417.0); Characteristics of the Population and Dwellings in Local Government Areas (2427.0 to 2434.0).
- 1981 Census publications including: Summary Characteristics of Persons and Dwellings: States, Territories and Australia (2435.0 to 2443.0); Counts of Aboriginals and Torres Strait Islanders, Australia, States and Territories 30 June 1971, 1976, 1981 (2164.0).  
Australian Demographic Statistics (3101.0).  
Methods and Procedures in the Compilation of Estimated Resident Population 1981 and in the Construction of the 1971-81 Time Series (3103.0).  
Estimates of Residents Temporarily Overseas, Visitors in Australia and Category Jumping (3104.0).  
Estimated Age Distribution of the Population: States and Territories of Australia (3201.0).  
Estimated Resident Population by Country of Birth and Sex: Australia (3221.0).  
Projections of the Population of Australia, States and Territories, 1984 to 2021 (3222.0).  
Birth Expectations of Married Women (3215.0).  
Births, Australia (3301.0).  
Deaths, Australia (3302.0).  
Perinatal Deaths, Australia (3304.0).  
Australian Life Tables (3305.0).  
Marriages, Australia (3306.0).  
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Overseas Arrivals and Departures, Australia (3401.0, 3402.0, 3404.0).  
Internal Migration (3408.0).  
Internal Migration in Australia, D. T. Rowland, Census Monograph, Australian Bureau of Statistics and the Department of Demography, Australian National University, 1979 (3409.0).  
Australian Mortality—A Study By Causes of Death—Occasional Paper (1980/1).  
Fertility of Australian Marriages (R Series, Demog 2).  
Language Survey, Australia, May 1983 (4503.0).  
Language in Australia (4504.0).

**1981 Census Information**

In addition to the publications listed above, final results of the 1981 Census have been released on microfiche, on computer printout and on magnetic tape. These results include small area statistics for Census collection districts, local government areas and larger regions.

A number of Census topic information papers have also been published.

## THE 1986 CENSUS: A PORTRAIT OF AUSTRALIA

### Introduction

The eleventh Census of Population and Housing was held on 30 June 1986 and involved contact with every household in Australia. The information derived from questions on the census form will provide a statistical portrait of the Australian population and the dwellings in which they live. The population census provides accurate counts which give a base for regular population estimates made for each State and each local government area. These estimates are required for the determination of the number of representatives in the Commonwealth Parliament and the allocation of federal funds to each State and local government authority. Census statistics are also used extensively by government bodies for policy formulation and administration at the federal, State and local level. Other users include welfare and social organisations, business organisations, research institutions and individuals.

### Selection of topics

Experience in Australia and other countries in recent years indicates the critical importance of having public co-operation when conducting a census. Recognising the high level of public interest, the Australian Bureau of Statistics (ABS) once again undertook an extensive program of topic selection and question development for the 1986 Census. The 1986 topic development program took place during 1983 and 1984. Known users of census data were invited to submit possible topics, while advertisements were placed in newspapers inviting public submissions. Approximately 3000 submissions were received, of which 900 requested 100 new topics. Each topic was assessed according to its importance and suitability to a census format. The assessment was supported by field testing of possible new questions and questions on difficult or sensitive topics.

Particular effort was made in developing the question on ethnicity. In 1982 the Population Census Ethnicity Committee was established, under the chairmanship of Professor Borrie, to consider the requirements for census data on the ethnic background of the population. The committee took into account overseas experience and the views of users. A number of possible questions were tested by the ABS. The Committee's recommendations, which included a question on ancestry, were published by the ABS (*The Measurement of Ethnicity in the Australian Census of Population and Housing, Cat. No. 2172.0*) and released for public consideration.

Recommendations on other census topics were also published by the ABS. Following further discussions with users, suggested census questions for all topics were considered by the Australian Statistics Advisory Council prior to Government consideration. In approving the content of the 1986 Census, the Government sought to obtain a balance between the needs of users for data, the need to elicit accurate and consistent answers and the need to avoid placing too great a burden on the public.

### The 1986 Census Form

The 1986 Census Household Form contained 40 questions, of which 34 related to personal characteristics and six to dwelling characteristics. Of these questions, 38 were answered by householders (requiring up to 46 responses), and two questions were answered by the collector. This form was distributed to all private dwellings and caravan parks prior to Census Night. All persons not in private dwellings on Census Night received a Personal Form which contained only the questions on personal characteristics. Questions on demographic topics (sex, age, marital status, relationship and fertility) and ethnicity topics (birthplace, ancestry, language, citizenship and year of arrival) constituted half of the personal questions. The remaining personal questions concerned education, income, usual residence and internal migration, religion, and employment status and labour force activity. The six dwelling questions concerned the number of bedrooms and motor vehicles, rent and mortgage details, persons temporarily absent from the dwelling, dwelling structure and whether the dwelling was occupied. The latter two questions were completed by census collectors.

For the first time, questions on each person's ancestry and language other than English spoken at home were included. This will greatly improve census data collected on the ethnic

composition of the Australian population. Census family data will also be improved. The new question on usual residents temporarily absent will correct an over-statement of the number of single parent families. Over-statements previously occurred where the spouse was away from the household over census night. Also, the question on relationship was altered to provide statistics on de facto living arrangements and children in blended families. Further important changes were an additional question on attendance at an educational institution and the deletion of the question on the material of outer walls of dwellings. The latter question is no longer considered a satisfactory indicator of housing conditions.

### **Publicity**

Public understanding and acceptance of the census is essential if statistics of a high quality are to be produced. For this reason, a public awareness campaign was conducted prior to the 1981 and 1986 Censuses. Research carried out before and after the 1981 Census showed that the public were more favourably disposed to the population census as a result of the publicity campaign. An increase in the quality of response was achieved in 1981. The number of persons missed in the census (under-enumeration) fell, as did the number of persons failing to answer particular questions (non-response). The aims of the 1986 campaign were to inform the public about the uses made of census information, to assist those who experience difficulty in completing the form, where to obtain assistance, and to explain the measures undertaken to ensure the confidentiality of the information provided. A census form and a separate booklet explaining the Census were delivered together to each household. Persons with questions had access to a telephone inquiry service, whilst a multi-language leaflet included in every booklet referred persons with difficulty in understanding English to the census telephone interpreter service. Census collectors were trained to assist persons to complete the form. In areas of sizeable ethnic communities, collectors proficient in a foreign language were employed. These procedures were supplemented by an extensive media campaign which included advertising on radio and television and in newspapers, including non-English language papers.

### **Aboriginal Enumeration**

The ABS has given considerable attention in the last four censuses to obtaining accurate statistics on the Aboriginal population. There is a strong demand for this information, particularly to aid the planning and funding of federal government programs. Special procedures were designed to gain the confidence and support of Aborigines. Additional staff were employed to increase the level of contact between Aboriginal communities and the ABS. Aboriginal collectors were employed in areas with a high Aboriginal population.

### **Conduct of the Census**

As in previous Australian censuses, the 1986 Census was self-enumerating whereby forms were distributed to, and collected from, the public over a three week period. This operation involved extensive planning and employment of a large number of people on a short-term basis. Valuable assistance was provided by staff of the Australian Electoral Commission who were responsible for the recruitment, training and general supervision of temporary census staff. The Division of National Mapping assisted in updating maps required for the distribution of census forms. Approximately 38,000 temporary staff were employed to distribute and collect census forms. Generally, each collector delivered forms to each occupied dwelling in their collection district. The size of these districts varied greatly, from less than one hectare to over 33,000 square kilometres. A small number of collectors were responsible for people in transit, such as those on trains, buses and aircraft. Approximately 11.2 million household and personal forms were distributed to field staff around Australia.

Despite the diligence of collectors, it is inevitable that some persons are missed on Census Night. Since the 1966 Census an attempt has been made to estimate this under-enumeration. During the third and fourth weeks after Census Night, a sample of about 40,000 households across Australia were interviewed to determine whether the members of the household had been included on a census form. The results of this survey (known as the Post-Enumeration Survey) supplemented by demographic analysis and estimates of the number of residents temporarily overseas on Census Night, are used to adjust the census population count on a usual residence basis to provide the estimated resident population of Australia at census date. Processing of 1986 census forms is being undertaken at the Census Data Transcription Centre in Sydney. This involves the checking and coding of answers on forms and the recording of coded information on computer files. Names and addresses will not be entered on to the

computer files. After processing, all household and personal forms are destroyed to ensure that personal information cannot be revealed. The processing of approximately 5-6 million completed household and personal forms will take nearly a year.

### **Census Results**

Census counts based on where people were on Census Night will be released progressively from February 1987, commencing with data for the Australian Capital Territory, then the Northern Territory followed by the States in order of population size. Further data releases will be in the form of statistical publications, microfiche and magnetic tape. There will be considerable flexibility for users to obtain census statistics on specific topics for a variety of geographical areas. Results based on place of enumeration will be available for areas such as collection districts, statistical local areas, urban centres/localities, statistical divisions, postcodes and electoral divisions. Results based on place of usual residence will be released much later in 1987, and will be available only for statistical local areas, or aggregations of those areas. In addition, magnetic tape files containing samples of unidentifiable persons in households will be released.

The ABS will also release a number of information papers on census topics, general information on the census, details of data release and the Catalogue of 1986 Census Tables (Cat. No. 2175.0) which will list all standard tables to be released. Information on the census, as well as census results, will be available from ABS offices in each capital city.

## CHAPTER 7

### PRICES

#### RETAIL PRICES AND PRICE INDEXES

Retail prices of food and groceries and average rentals of houses have been collected by the Australian Bureau of Statistics for the years extending back to 1901 and, in some cases, by the statistical offices of various States for earlier years.

Retail prices of a more extensive range of commodities (including clothing) and certain services in common demand have been collected at frequent and regular intervals since 1923. (Comparable information was collected for the month of November in each year from 1914 to 1922.) The range of items for which retail prices data is obtained was considerably expanded in 1948 and in later years. Average retail prices of certain food and grocery items in the relevant periods were published in the annual *Labour Report* (now discontinued). Descriptions of these earlier indexes were last published in *Labour Report No. 58, 1973*.

The current retail price index, the Consumer Price Index (CPI), was published for the first time in August 1960 and was compiled retrospectively to the September quarter 1948. A description of the Consumer Price Index is given below.

Further information about the CPI is contained in a booklet entitled *A Guide to the Consumer Price Index* (6440.0) which is available from the ABS on request. For a more detailed account, *The Australian Consumer Price Index, Concepts, Sources and Methods* (6461.0) describes what the index measures, the goods and services included in it, and how the index is produced; it also describes the problems encountered in compiling the CPI and how those are dealt with.

#### The Consumer Price Index

##### Introduction

The CPI measures quarterly changes in the price of a 'basket' of goods and services which account for a high proportion of expenditures by metropolitan wage and salary earner households. This 'basket' covers a wide range of goods and services, arranged in the following eight groups: food; clothing; housing; household equipment and operation; transportation; tobacco and alcohol; health and personal care; and recreation and education. Each group is in turn divided into sub groups.

From June quarter 1982 the geographic coverage of the CPI was expanded to include Darwin.

Index numbers at the *group* and *All Groups* levels are published for each capital city, and for the weighted average of eight capital cities. *Subgroup index numbers* are also published for the weighted average of eight capital cities.

##### Index population

Because the spending patterns of various groups in the population differ somewhat, the pattern of one large group, fairly homogeneous in its spending habits, is chosen for the purpose of calculating the CPI. The CPI population group is, in concept, *metropolitan employee households*. For this purpose *employee households* are defined as those households which obtain the major part of their household income from wages and salaries; and *metropolitan* means the eight capital cities.

##### Weighting pattern

There are 105 expenditure classes (i.e. groupings of like items) within the current CPI and each expenditure class has its own weight, or measure of relative importance. In calculating the index, price changes for the various expenditure classes are combined using these weights.

Changes in the weighting pattern have been made at approximately five-yearly intervals to take account of changes in household spending patterns. The CPI, in fact, comprises ten series of price indexes which have been linked to form a continuous series. The tenth series



(i.e. the current series) was introduced as from the March quarter 1982, with a weighting pattern based on estimated household expenditure in 1979-80 and on a reference base 1980-81 = 100.0. Broad details of the weighting pattern are shown in the table on page 128.

More detailed information is available in *The Australian Consumer Price Index, Concepts, Sources and Methods*.

The CPI 'basket' of goods and services covers items which are considered representative of metropolitan household spending habits and whose prices can be associated with an identifiable and specific quantity of a commodity or service. For instance, price changes for a given quantity and quality of bread or refrigerators can be measured and included in the CPI. Income taxes and personal savings, on the other hand, do not form part of the CPI because they cannot be clearly associated with the purchase of a specific quantity of a good or service.

### **Price collection**

Since the CPI is designed to measure the impact of changing prices on metropolitan wage and salary earner households, price movements are monitored in the kinds of retail outlets or other establishments where such households would normally purchase goods and services. This involves collecting prices from many sources including supermarkets, department stores, footwear stores, restaurants, garages, dental surgeries and hairdressers. Items such as bus, rail and air fares, electricity and gas charges, telephone charges and local authority rates are collected from the appropriate authorities. Information on rents is obtained from property management companies and government housing authorities. In total, around 85,000 separate price quotations are collected each quarter.

Prices of the goods and services included in the CPI are generally collected quarterly. However, some important items are priced monthly or more frequently (e.g. bread, fresh meat and fish, fresh fruit and vegetables, petrol, alcohol and tobacco) and a small number annually (e.g. seasonal clothing, local government rates and charges).

The bulk of items for which prices are collected quarterly are priced at the middle of the mid-month of the quarter (i.e. in August, November, February and May), but, to facilitate a more even spread of the field collection workload, some goods and services are priced in the first and third months of each quarter. Items priced in the third month are generally those subject to price changes at discrete points of time (e.g. electricity and postal charges, milk); in these cases information is obtained of any changes in price during the quarter so that a weighted average price for the whole quarter can be calculated.

The prices used in the CPI are those that any member of the public would have to pay on the pricing day to purchase the specified good or service. Any sales or excise taxes which the consumer must pay when purchasing specific items are included in the CPI price. Sale prices, discount prices and 'specials' are reflected in the CPI so long as the items concerned are of normal quality (i.e. not damaged or shop soiled) and are offered for sale in reasonable quantities. To ensure that the price movements reflect the experience of the bulk of the metropolitan population, the brands and the varieties of the items which are priced are generally those which sell in greatest volume.

### **Changes in quality**

The CPI aims to measure the price change of a constant basket of goods and services over time. For this reason, efforts are made to ensure that identical or equivalent items are priced in successive time periods. This involves evaluating changes in the quality of goods and services included in the index, and removing the effects of such changes so that the index reflects only the price change.

### **Periodic revision of the CPI**

The CPI is periodically revised in order to ensure it continues to reflect current conditions. CPI revisions have usually been carried out at approximately five-yearly intervals, the most recent having been completed in June 1982. Following each revision the new series, with its changed composition and weighting pattern, is linked to the previous series to form one continuous series. The process of linking ensures that the continuous series reflects only price variations and not differences in costs of the old and new baskets.

**Earlier CPI series**

The index has been compiled for each quarter from the September quarter 1948. The above description of the CPI refers to the tenth series which was introduced as from the March quarter 1982. A description of earlier CPI series is contained in the *Labour Report No. 58, 1973*, and in previous issues of the Year Book.

**CONSUMER PRICE INDEX: ALL GROUPS INDEX NUMBERS***(Base of each index: Year 1980-81 = 100.0) (a)*

<i>Period</i>	<i>Sydney</i>	<i>Mel- bourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Canberra</i>	<i>Darwin</i>	<i>Weighted average of eight capital cities</i>
<b>Year—</b>									
1979-80 . . . .	91.1	91.4	91.5	91.6	91.9	91.6	91.1	..	..
1980-81 . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981-82 . . . .	110.2	110.4	110.7	110.5	111.2	110.0	110.7	111.1	110.4
1982-83 . . . .	123.4	122.8	122.9	123.5	122.5	121.8	124.0	123.1	123.1
1983-84 . . . .	130.9	132.1	131.7	132.3	131.0	129.9	132.3	130.2	131.6
1984-85 . . . .	136.0	138.1	137.9	138.7	136.1	136.1	138.8	135.1	137.2
<b>Quarter—</b>									
<b>1983-84—</b>									
March . . . .	131.2	132.6	132.3	132.9	131.1	130.7	133.1	131.0	132.0
June . . . .	131.2	133.0	133.3	133.1	131.1	130.9	133.3	130.9	132.3
<b>1984-85—</b>									
September . . .	132.8	134.9	135.2	134.7	133.2	132.3	135.3	132.7	134.0
December . . .	134.7	136.6	136.5	137.5	134.7	134.9	137.4	134.0	135.9
March . . . .	136.8	138.3	138.7	139.4	136.7	137.1	139.6	135.2	137.8
June . . . .	139.7	142.4	141.1	143.0	139.9	140.2	142.8	138.4	141.1

(a) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.

**CONSUMER PRICE INDEX: GROUP INDEX NUMBERS  
WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES***(Base of each index: Year 1980-81 = 100.0 unless otherwise noted)*

<i>Period</i>	<i>Food</i>	<i>Clothing</i>	<i>Housing</i>	<i>Household equipment and operation</i>	<i>Transport- ation</i>	<i>Tobacco and alcohol</i>	<i>Health and personal care</i>	<i>Recreation and education(a)</i>	<i>All groups</i>
<b>Year—</b>									
1980-81 . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	..	100.0
1981-82 . . . .	108.6	107.1	111.1	110.6	110.3	109.2	124.2	..	110.4
1982-83 . . . .	118.5	114.2	122.8	123.8	124.2	124.1	153.2	107.7	123.1
1983-84 . . . .	127.7	120.9	131.5	132.6	134.8	139.6	146.5	114.5	131.6
1984-85 . . . .	134.4	128.4	141.4	138.9	143.4	151.3	121.8	118.9	137.2
<b>Quarter—</b>									
<b>1983-84—</b>									
March . . . .	129.2	120.9	132.6	133.7	135.5	142.0	135.5	115.9	132.0
June . . . .	128.8	124.4	135.5	134.8	138.1	145.5	118.2	115.4	132.3
<b>1984-85—</b>									
September . . .	131.6	124.9	137.9	136.2	139.7	147.5	118.2	116.7	134.0
December . . .	133.5	128.1	140.2	137.6	140.9	150.5	120.8	116.9	135.9
March . . . .	134.9	128.4	142.2	139.7	143.4	152.4	123.1	119.5	137.8
June . . . .	137.4	132.0	145.4	142.1	149.7	154.6	125.0	122.5	141.1

(a) Base March quarter 1982 = 100.0. Group index not compiled for quarters prior to the base period.

**CONSUMER PRICE INDEX: WEIGHTING PATTERN OF CPI GROUPS AND SUB-GROUPS, FOR  
WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES AT MARCH QUARTER 1982**

<i>Group/Sub-group</i>	<i>Percentage contribution to the all groups CPI</i>
<b>FOOD</b>	<b>21.287</b>
Dairy produce	2.023
Cereal products	2.257
Meat and seafoods	4.928
Fresh fruit and vegetables	1.691
Processed fruit and vegetables	0.896
Soft drinks, ice cream and confectionery	2.751
Meals out, take-away food	4.633
Other food	2.108
<b>CLOTHING</b>	<b>7.826</b>
Men's and boys' clothing	2.347
Women's and girls' clothing	3.268
Piecegoods and other clothing	0.462
Footwear	1.334
Clothing and footwear services	0.415
<b>HOUSING</b>	<b>13.508</b>
Rent	4.188
Home ownership	9.320
<b>HOUSEHOLD EQUIPMENT AND OPERATION</b>	<b>13.627</b>
Fuel and light	2.585
Furniture and floor coverings	2.380
Appliances	1.640
Drapery	0.897
Household utensils and tools	1.421
Household supplies and services	3.401
Postal and telephone services	1.303
<b>TRANSPORTATION</b>	<b>16.377</b>
Private motoring	14.980
Urban transport fares	1.397
<b>TOBACCO AND ALCOHOL</b>	<b>8.455</b>
Alcoholic beverages	6.070
Cigarettes and tobacco	2.385
<b>HEALTH AND PERSONAL CARE</b>	<b>7.503</b>
Health services	4.749
Personal care products	2.085
Personal care services	0.669
<b>RECREATION AND EDUCATION</b>	<b>11.417</b>
Books, newspapers, magazines	1.532
Other recreational goods	2.660
Holiday travel and accommodation	3.616
Other recreational services	2.345
Education and child care	1.264
<b>TOTAL ALL GROUPS</b>	<b>100.000</b>

### Previous retail price indexes

Five series of retail price indexes were compiled by the ABS at various times prior to the introduction of the Consumer Price Index in 1960. These indexes are described in Year Book No. 61.

An index of retail price movements from 1901 onwards has been derived by linking together the following indexes: from 1901 to 1914, the 'A' Series Retail Price Index; from 1914 to 1946-47, the 'C' Series Retail Price Index; from 1946-47 to 1948-49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding

Rent; and from 1948-49 onwards, the Consumer Price Index. The continuous series derived in this way is shown in the table below. As the indexes differ greatly in scope, the resulting series is only a broad indication of long-term trends in retail prices.

**RETAIL PRICE INDEX NUMBERS  
WEIGHTED AVERAGE OF CAPITAL CITIES (a)**

(Base: Year 1945=100)

Year	Index number	Year	Index number	Year	Index number
1901	47	1929	91	1957	229
1902	50	1930	87	1958	233
1903	49	1931	78	1959	237
1904	46	1932	74	1960	245
1905	48	1933	71	1961	252
1906	48	1934	73	1962	251
1907	48	1935	74	1963	252
1908	51	1936	75	1964	258
1909	51	1937	78	1965	268
1910	52	1938	80	1966	276
1911	53	1939	82	1967	286
1912	59	1940	85	1968	293
1913	59	1941	89	1969	302
1914(b)	61	1942	97	1970	313
1915(b)	70	1943	101	1971	332
1916(b)	71	1944	100	1972	352
1917(b)	75	1945	100	1973	385
1918(b)	80	1946	102	1974	443
1919(b)	91	1947	106	1975	510
1920(b)	103	1948	117	1976	579
1921(b)	90	1949	128	1977	650
1922(b)	87	1950	140	1978	702
1923	89	1951	167	1979	766
1924	88	1952	196	1980	844
1925	88	1953	205	1981	926
1926	90	1954	206	1982	1,028
1927	89	1955	211	1983	1,132
1928	89	1956	224	1984	1,177

(a) Weighted average of 6 State capital cities to 1980; thereafter the weighted average of 8 capital cities (State capitals, Canberra and Darwin). (b) November

**PRODUCER PRICE INDEXES**

**Introduction**

In previous year books Producer Price Indexes have been described as Wholesale Price Indexes. The first index of this type published by the ABS was the Melbourne Wholesale Price Index which was introduced in 1912; index numbers are available for the period 1861 to 1961. The next index published was the Wholesale Price (Basic Materials and Foodstuffs) Index which was introduced in 1939; index numbers are available for the period 1928 to 1970. Further information concerning these indexes can be found in Year Book No. 61.

During the 1960s the ABS began producing a range of price indexes covering materials used and articles produced by defined sectors of the Australian economy. The following Producer price indexes are now published monthly:

- Price Index of Materials Used in House Building
- Price Index of Materials Used in Building Other than House Building
- Price Index of Materials Used in Manufacturing Industry and
- Price Indexes of Articles Produced by Manufacturing Industry.

Prices are collected from representative suppliers or manufacturers of the materials or articles included in the indexes. Mid-month prices are generally used to compile the two building materials indexes and the Price Indexes of Articles Produced by Manufacturing Industry. Average monthly prices are mainly used to compile the Price Index of Materials Used in Manufacturing Industry.

Published index numbers for financial years are simple averages of the relevant monthly index numbers. Annual index numbers for these indexes are shown below. Index numbers

for each month, together with more detailed information concerning methods used in compiling these indexes, are shown in the bulletins published for each index. Information on the weighting patterns for each index is available from the ABS on request.

### Price index of materials used in house building

This index measures changes in prices of selected materials used in the construction of houses. Its composition reflects the usage of materials in houses which were selected as representative for the purpose. Weights are based on the year 1968-69. The reference base of the index is the year 1966-67 = 100.0. Further information concerning the method of compiling the index, as well as more detailed index numbers, is shown in the publications *Price Index of Materials Used in House Building* (6408.0), *Labour Report* No. 58, 1973 and *Year Book* No. 60.

#### PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING ALL GROUPS INDEX NUMBERS—SIX STATE CAPITAL CITIES

(Base of each index: Year 1966-67=100.0)

	State capital cities(a)						Weighted average of six State capital cities
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	
1975-76 . . . . .	211.1	200.1	218.5	222.5	201.9	209.2	208.1
1976-77 . . . . .	234.5	223.6	243.5	250.7	229.8	235.1	232.9
1977-78 . . . . .	254.0	238.6	265.1	270.7	253.4	256.7	252.0
1978-79 . . . . .	272.7	251.4	281.3	292.1	268.2	273.6	268.1
1979-80 . . . . .	309.5	283.4	315.0	338.5	299.4	304.2	302.9
1980-81 . . . . .	347.6	324.7	363.7	386.1	337.6	338.2	344.0
1981-82 . . . . .	r 378.2	r 354.9	407.2	427.2	r 373.0	371.7	r 377.7
1982-83 . . . . .	r 407.5	r 392.0	r 447.1	r 480.2	r 407.6	r 405.3	r 413.5
1983-84 . . . . .	r 432.9	430.3	r 482.8	r 519.1	r 434.2	r 438.7	r 445.6
1984-85 p . . . . .	468.2	467.8	514.6	564.0	461.1	488.5	480.9

(a) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.

### Price index of materials used in building other than house building

The *Price Index of Materials Used in Building Other than House Building* (6407.0), on a reference base 1966-67 = 100.0, was discontinued in January 1981. Monthly index numbers on a 1966-67 = 100.0 reference base are available for the period July 1966 to January 1981. A description of the discontinued index is shown in previous year books and in the monthly publications issued up to and including January 1981.

The revised *Price Index of Materials Used in Building Other than House Building* for the six State capital cities was introduced in February 1981 on reference base 1979-80 = 100.0. The index for Darwin was published for the first time in September 1982 on a reference base 1981-82 = 100.0.

This index measures changes in prices of selected materials used in the construction of buildings other than houses. Its composition reflects the usage of materials in the construction of buildings (other than houses) commenced in the three years ending June 1977.

Further information concerning the method of compiling the index can be obtained from the February 1981 and the September 1982 issues of the publication *Price Index of Materials Used in Building Other than House Building—Six State Capital Cities and Darwin* (6407.0).

The tables below show annual 'All groups' index numbers for each State capital city and Darwin and index numbers for selected building materials for the weighted average of six State capital cities. Monthly index numbers for selected materials and special combinations of materials are shown in each issue of the monthly price index publication *Price Index of Materials Used in Building Other than House Building—Six State Capital Cities and Darwin* (6407.0).

PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING  
ALL GROUPS  
SIX STATE CAPITAL CITIES AND DARWIN (a)

Base Year	Weighted average of six State capital cities	INDEX NUMBERS						
		Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin
		1979-80=100.0						1981-82=100.0
1975-76(b)	68.1	67.8	68.3	69.0	66.9	67.3	69.7	n.a.
1976-77(b)	76.0	75.5	76.6	77.0	74.5	76.0	77.8	n.a.
1977-78(b)	82.4	81.8	83.0	83.2	80.9	83.4	84.1	n.a.
1978-79(b)	88.5	88.3	88.5	88.9	87.3	89.4	89.6	n.a.
1979-80	100.0	100.0	100.0	100.0	100.0	100.0	100.0	n.a.
1980-81	112.9	113.1	112.7	113.2	113.8	112.2	111.6	n.a.
1981-82	125.4	126.6	123.5	126.3	r 127.3	123.8	122.9	100.0
1982-83	r 139.6	r 141.1	r 135.9	r 141.4	r 143.9	r 138.4	r 135.9	111.2
1983-84	r 147.3	r 148.1	r 143.4	r 151.7	r 152.6	r 145.4	r 145.7	r 118.3
1984-85 p	155.5	155.6	152.8	159.4	160.8	153.2	153.5	122.0

(a) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.  
(b) The index series for years prior to 1979-80 are based on the series previously published on a reference base 1966-67=100.0. They have been converted to the reference base 1979-80=100.0 by linking the old and new series in the year 1979-80.

PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING  
INDEX NUMBERS FOR SELECTED BUILDING MATERIALS  
WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES

(Base of each index: Year 1979-80=100.0)

	Structural timber	Clay bricks	Ready mixed concrete	Galvanised steel decking cladding and sheet products	Structural steel	Reinforcing steel bar fabric and mesh
				Structural steel		Reinforcing steel bar fabric and mesh
1979-80	100.0	100.0	100.0	100.0	100.0	100.0
1980-81	113.5	114.2	113.2	113.4	114.5	114.6
1981-82	123.3	127.4	123.7	127.3	128.1	126.4
1982-83	133.8	142.6	143.3	138.7	138.8	138.9
1983-84	144.9	151.6	149.6	145.3	141.4	148.6
1984-85 p	160.6	162.9	158.6	150.8	147.6	148.2

	Aluminium windows	Conductors (mains cable and circuitry)	Lamps and light fittings	Non-ferrous pipes	Builders' hardware	Paint
		Conductors (mains cable and circuitry)	Lamps and light fittings	Non-ferrous pipes	Builders' hardware	Paint
1979-80	100.0	100.0	100.0	100.0	100.0	100.0
1980-81	112.5	105.2	109.6	95.4	113.6	118.9
1981-82	126.3	115.6	122.8	95.2	127.6	129.6
1982-83	136.2	135.2	137.8	106.0	143.9	149.5
1983-84	144.2	150.3	145.1	113.7	154.8	162.2
1984-85 p	152.7	171.9	151.0	122.1	163.8	177.0

Price index of materials used in manufacturing industry

This index measures changes in prices of materials (including fuels) used by establishments classified to the Manufacturing Division of the Australian Standard Industrial Classification (ASIC), as described in the ABS publication *Australian Standard Industrial Classification (Preliminary Edition) 1969 (1201.0)*. The index is on a net basis, i.e. it relates in concept only to those materials which are used by establishments within the Manufacturing Division in Australia and which have been produced by establishments outside that Division. Materials purchased by establishments classified to the Australian Manufacturing Division from other establishments in that Division are outside the scope of the index.

The reference base of the index is the year 1968-69=100.0. Its composition reflects estimated usage of materials by manufacturers in the year 1971-72. The items included in the index are combined for publication purposes into broad groups using two different classifications:

- (i) Australian Standard Industrial Classification (ASIC), and
- (ii) Standard International Trade Classification (SITC (R)).

Index numbers based on the ASIC are presented below. Further information concerning the method of compiling the index, as well as more detailed index numbers, is shown in the publications *Price Index of Materials Used in Manufacturing Industry, Australia* (6411.0) and Year Book No. 61.

This index is presently being revised. A new and expanded set of indexes with a reference base: Year 1984-85=100.0 is to be introduced in 1986.

**PRICE INDEX OF MATERIALS USED IN MANUFACTURING INDUSTRY (a): GROUP INDEX  
NUMBERS BASED ON AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION**

(Base of each index: Year 1968-69=100.0)

Value weight	Imported materials				Home produced materials				Total home produced materials	All groups
	Agri-culture	Mining	Manu- facturing	Total imported materials	Agri-culture	Forestry and fishing	Mining	Elec- tricity		
	1.92%	4.17%	21.07%	27.16%	47.04%	1.12%	18.92%	5.76%	72.84%	100.00%
1975-76	166.5	423.6	162.6	202.9	132.3	213.7	163.3	137.9	142.0	158.6
1976-77	258.6	479.5	182.1	233.2	152.5	245.2	189.2	148.8	163.2	182.2
1977-78	303.4	515.3	201.6	257.0	162.4	273.5	211.4	160.9	176.7	198.5
1978-79	285.3	542.6	222.1	275.7	228.8	263.5	281.8	173.8	238.7	248.8
1979-80	329.2	911.8	261.8	366.4	280.3	300.3	403.5	186.7	305.2	321.8
1980-81	293.6	1,146.3	278.7	413.0	295.9	344.4	454.1	210.2	330.9	353.2
1981-82	264.5	1,247.8	290.6	435.7	282.0	363.0	472.1	253.3	330.3	358.9
1982-83	303.6	1,318.7	310.6	464.9	288.8	378.8	541.1	333.9	359.3	388.0
1983-84	344.0	1,288.2	323.6	473.1	r312.3	410.1	r538.2	351.3	r375.6	r402.1
1984-85p	370.6	1,377.5	354.8	512.9	317.9	447.4	564.9	361.8	387.5	421.6

(a) The index is on a net basis and relates in concept only to materials that enter Australian manufacturing industry from other sectors of the Australian economy or from overseas.

### Price indexes of articles produced by manufacturing industry

These indexes measure changes in the prices of articles produced by establishments classified to the Manufacturing Division of the Australian Standard Industrial Classification (ASIC). Indexes are on a *net basis*, i.e. they relate in concept only to those articles which are produced in defined sectors of Australian manufacturing industry for sale or transfer to other sectors or for export or for use as capital equipment. Articles which are sold or transferred to other establishments within the sector for further processing as materials, components, fuels, etc. are excluded.

The following sector price indexes are published:

- (i) a net index for the Manufacturing Division of ASIC (known as the *All Manufacturing Industry Index*), and
- (ii) net indexes for the twelve sub-divisions within the Manufacturing Division.

The reference base of the indexes is the year 1968-69=100.0. Their composition reflects estimated net sector production in the year 1971-72.

The items included in the indexes are combined for publication purposes using the structure of the Australian Standard Industrial Classification (ASIC).

Further information concerning the method of compiling monthly index numbers for each index is shown in the publication *Price Indexes of Articles Produced by Manufacturing Industry, Australia* (6412.0). Further information about the indexes is also shown in Year Book No. 62.

## PRICE INDEXES OF ARTICLES PRODUCED BY MANUFACTURING INDUSTRY (a)

(Base of each index: Year 1968-69=100.0)

Net subdivision indexes (c)							
Year	All Manufacturing Industry Index (b)	Food, beverages and tobacco (21-22)	Textiles (23)	Clothing and footwear (24)	Wood, wood products and furniture (25)	Paper, paper products and printing (26)	Chemical, petroleum and coal products (27)
1975-76	177.8	163.5	159.7	185.2	219.9	196.3	168.2
1976-77	196.9	180.0	178.6	208.1	246.8	212.8	182.4
1977-78	213.8	195.6	193.3	225.2	264.0	231.7	200.7
1978-79	237.4	226.4	205.1	238.4	280.4	245.0	233.1
1979-80	274.9	266.5	228.8	255.3	315.5	269.6	307.4
1980-81	305.3	290.9	252.7	276.5	357.3	304.2	366.8
1981-82	328.9	301.9	270.6	298.1	388.4	346.0	400.9
1982-83	360.2	328.2	286.7	316.0	424.9	390.4	442.4
1983-84	382.8	355.5	305.8	333.2	455.4	413.6	456.8
1984-85p	404.8	377.0	322.6	352.1	494.3	442.2	480.8

Year	Glass, clay and other non-metallic mineral products (28)	Basic metal products (29)	Fabricated metal products (31)	Transport equipment (32)	Other industrial machinery and equipment and household appliances (33)	Miscellaneous manufacturing products (34)
1975-76	183.2	174.0	217.1	175.8	179.2	159.0
1976-77	202.5	200.6	244.9	195.0	199.4	176.0
1977-78	219.8	214.0	268.7	211.6	215.3	192.4
1978-79	236.8	237.2	287.7	230.2	232.2	209.8
1979-80	265.2	282.7	323.9	252.2	261.3	252.5
1980-81	300.2	297.8	371.6	275.7	289.7	273.9
1981-82	337.2	315.3	414.2	303.2	320.7	289.5
1982-83	382.1	345.5	452.5	r335.4	353.1	r313.4
1983-84	404.0	365.5	480.1	358.9	372.6	r342.1
1984-85p	429.2	381.0	505.3	378.7	390.2	361.4

(a) For a full description of Division C, 'Manufacturing' and the subdivisions within the Manufacturing Division, see *Australian Standard Industrial Classification (ASIC), Preliminary Edition, 1969*. (b) This index is on a net division basis and relates in concept only to articles which are produced in the Manufacturing Division of ASIC for sale or transfer outside the Division. (c) These indexes are on a net subdivision basis; the index for each subdivision relates in concept to articles which are produced in that subdivision for sale or transfer outside the subdivision.

## FOREIGN TRADE PRICE INDEXES

## Introduction

The ABS compiles price indexes for merchandise imported into and exported from Australia. Both indexes are calculated using fixed weights. Prices are collected from representative importers or exporters of the goods included in the indexes. Average monthly prices are used to compile the Export Price Index and average quarterly prices are used to compile the Import Price Index.

The Export Price Index is compiled and published monthly while the Import Price Index is compiled and published quarterly. Published index numbers for financial years are simple averages of the relevant monthly or quarterly index numbers. Annual index numbers for these indexes are shown below. Index numbers for each month (for the Export Price Index) or quarter (for the Import Price Index), together with more detailed information concerning methods used in compiling these indexes, are shown in the bulletins published for each index. Information on the weighting patterns for each index is available from the ABS on request.

## Import price index

The first issue of the Import Price Index produced by the ABS was released in May 1983 and covers the period September quarter 1981 to December quarter 1982, on a reference base 1981-82 = 100.0. This index, published quarterly, replaced the import price index previously published by the Reserve Bank of Australia on a reference base 1966-67 = 100.



The Import Price Index measures changes in prices of *imports of merchandise* into Australia. The index numbers for each quarter relate to prices of imports landed in Australia during the quarter.

The commodities directly represented in the index were selected on the basis of their import values and were allocated weights in accordance with the average value of imports for each commodity over the three years ended June 1981.

The selected commodities are combined for publication purposes into broad index groups using three different classifications:

- (i) Australian Import Commodity Classification (AICC) 1980-81 (1204.0)
- (ii) Australian Standard Industrial Classification (ASIC) 1978 (1201.0)
- (iii) United Nations Classification by Broad Economic Categories (BEC) 1976

In addition, BEC categories have been rearranged to form the broader end use classes: Capital goods, Intermediate goods and Consumption goods. Index numbers based on the AICC and BEC are presented below.

Further information concerning the method of compiling the index can be obtained from the December Quarter 1982 issue of the publication *Import Price Index* (6414.0) and Year Book No. 68. More detailed index numbers are shown in the quarterly publication *Import Price Index, Australia* (6414.0).

#### IMPORT PRICE INDEX

##### INDEX NUMBERS BASED ON THE AUSTRALIAN IMPORT COMMODITY CLASSIFICATION (AICC)

(Base of each index: Year 1981-82=100.0)

Year	AICC Sections									
	All groups	Food and live animals chiefly for food (0)	Beverages and tobacco (1)	Crude materials inedible except fuels (2)	Mineral fuels lubricants and related materials (3)	Animal and vegetable oils and fats and waxes (4)	Chemicals and related products n.e.s. (5)	Manufactured goods chiefly by material (6)	Machinery and transport equipment (7)	Miscellaneous manufactured articles and non-monetary gold (8 & 9 part)
1981-82 . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1982-83 . . . . .	110.4	111.6	120.9	104.9	109.2	98.0	106.7	109.4	112.1	112.1
1983-84 . . . . .	r114.4	123.0	128.9	r107.9	104.2	135.9	106.7	114.4	r118.6	r118.9
1984-85p . . . . .	126.5	139.0	139.8	121.2	117.4	146.5	115.5	127.3	130.3	130.9

#### IMPORT PRICE INDEX

##### INDEX NUMBERS FOR BROAD ECONOMIC CATEGORIES (BEC) AND END USE CLASSES

(Base of each index: Year 1981-82=100.0)

Year	Broad economic categories					End use classes 1			
	Food and beverages	Industrial supplies not elsewhere specified	Fuels and lubricants	Capital goods (except transport equipment) and parts and accessories thereof	Transport equipment and parts and accessories thereof	Consumer goods not elsewhere specified	Capital goods	Intermediate goods	Consumption goods
1981-82 . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1982-83 . . . . .	110.1	107.9	109.2	112.1	112.9	111.0	111.1	109.3	112.0
1983-84 . . . . .	122.9	110.8	104.2	r116.9	123.8	r116.8	r116.6	r111.5	r118.9
1984-85p . . . . .	137.4	123.3	117.4	127.6	137.4	127.3	127.6	124.3	130.1

1. Broad Economic Categories rearranged into end use classes.

## Export price index

An annual index of export prices has been published by the ABS since its inception. Brief descriptions of indexes covering the period between 1901 and 1979 are shown in Year Book No. 55, pages 256-7 and Year Book No. 58, pages 240-2.

The revised Export Price Index was introduced in July 1979. It relates to *all exports of merchandise* from Australia. The index numbers for each month relate to prices of those exports of merchandise that are physically shipped from Australia during that month.

The reference base of the index is the year 1974-75 = 100. The commodities directly represented in the index were selected on the basis of their export values and were allocated weights in accordance with the average value of exports for each commodity over the three years ended June 1977.

The selected commodities are combined for publication purposes into broad index groups using two different classifications:

- (i) Australian Export Commodity Classification (AECC) 1978-79 (1203.0);
- (ii) Australian Standard Industrial Classification (ASIC) 1978 (1201.0).

Further information concerning the method of compiling the index can be obtained from the July 1979 issue of the publication *Export Price Index* (6405.0) and Year Book No. 64. More detailed index numbers are shown in the monthly publication. *Export Price Index, Australia* (6405.0).

**EXPORT PRICE INDEX:**  
**INDEX NUMBERS BASED ON AUSTRALIAN EXPORT COMMODITY CLASSIFICATION (AECC)**  
(Base of each index: Year 1974-75 = 100)

Year	<i>AECC Sections</i>					
	<i>All groups</i>	<i>Food and live animals (0)</i>	<i>Crude materials inedible (except fuels) (2)</i>	<i>Mineral fuels and lubricants (3)</i>	<i>Animal and vegetable oils and fats (4)</i>	<i>Chemicals and other manufactured exports (5, 6, 7 and 8)</i>
	1975-76 . . .	109	97	115	144	98
1976-77 . . .	122	98	141	156	117	118
1977-78 . . .	128	100	149	167	136	125
1978-79 . . .	144	119	162	170	157	146
1979-80 . . .	174	145	191	198	169	188
1980-81 . . .	185	162	202	217	145	181
1981-82 . . .	187	147	219	247	139	178
1982-83 . . .	203	152	242	287	138	191
1983-84 . . .	208	163	242	269	168	r203
1984-85p . . .	223	171	264	288	211	216

**EXPORT PRICE INDEX:**  
**INDEX NUMBERS BASED ON AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION (ASIC)**  
(Base on each index: Year 1974-75 = 100)

Year	<i>ASIC Divisions</i>		
	<i>Agriculture, forestry, fishing and hunting (A)</i>	<i>Mining (B)</i>	<i>Manufacturing (C)</i>
1975-76 . . .	98	130	105
1976-77 . . .	106	148	119
1977-78 . . .	105	159	127
1978-79 . . .	114	163	150
1979-80 . . .	137	180	190
1980-81 . . .	150	191	199
1981-82 . . .	153	221	191
1982-83 . . .	158	262	202
1983-84 . . .	169	244	212
1984-85p . . .	182	265	226

## PRICES SURVEILLANCE AUTHORITY

### General

On 19 March 1984, concurrent with the proclamation of the *Prices Surveillance Act 1983*, the Petroleum Products Pricing Authority was abolished and its activities subsumed by the Prices Surveillance Authority.

The functions of the Authority are to consider price notices submitted to it in accordance with Section 22 of the Act and to hold inquiries into matters relating to prices for the supply of goods and services. The Authority is required to report to the Minister the results of each such inquiry.

**Legislative Provisions**

The Act provides for the declaration of persons in relation to the supply of specified goods and services. Notifications to the Authority are required where declared persons propose to charge higher than currently existing prices for those specified goods and services. Action by the Authority in relation to price notifications includes the issuing of a notice stating that it has no objection to the proposed prices, a notice that it has no objection to a price lower than the proposed price, and recommending to the Minister that a public inquiry be held.

The Authority is required to hold such inquiries as directed by the Minister and, with the approval of the Minister, such other inquiries as it thinks fit.

Although the Act provides that prices shall not be increased during an inquiry provision exists for the granting of interim price increases pending the outcome of an inquiry.

**BIBLIOGRAPHY****ABS Publications**

- Monthly summary of statistics (1304.0)
- Digest of current economic statistics (monthly) (1305.0)
- Consumer price index (quarterly) (6401.0)
- Average retail prices of selected items (quarterly) (6403.0)
- Export price index (monthly) (6405.0)
- Price index of materials used in building other than house building (monthly) (6407.0)
- Price index of materials used in house building (monthly) (6408.0)
- Price index of metallic materials (monthly) (6410.0)
- Price index of materials used in manufacturing industry (monthly) (6411.0)
- Price indexes of articles produced by manufacturing industry (monthly) (6412.0)
- Import price index (quarterly) (6414.0)
- A guide to the Consumer Price Index (irregular) (6440.0)
- The Australian Consumer Price Index. Concepts Sources and Methods (irregular) (6461.0)

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**IN RETROSPECT.....Year Book No 23 (1930)**

The Royal Commission on the Basic Wage in 1920 recommended in its report that a method should be adopted of ascertaining *from time to time the rise and fall in the purchasing-power of money in its relation to the total household expenditure*. The Government adopted the recommendation, and the duty of carrying out the necessary investigations was entrusted to the Bureau of Census and Statistics.

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## CHAPTER 8

### THE LABOUR MARKET

The principal subjects covered in this chapter are labour force, unemployment, wage rates, earnings, hours of work, industrial disputes, trade unions and Commonwealth Government employment and training programs. Further detail on these subjects is contained in *Labour Statistics, Australia* (6101.0), *A Guide to Labour Statistics* (6102.0) and in other publications listed at the end of this chapter.

#### THE LABOUR FORCE

Fundamental to the measurement of employment and unemployment is the concept of the labour force. The labour force is defined broadly as those persons aged 15 and over who during a particular week are either employed or unemployed. The labour force represents the total official supply of labour available to the labour market during a given week.

This section presents some summary statistics on the civilian labour force drawn from the ABS monthly labour force survey and associated supplementary surveys. Set out below is a range of characteristics such as whether persons are employed, unemployed or not in the labour force, together with demographic information (i.e. age, sex, marital status, birthplace, etc.). For a description of the labour force survey and its relationship to the population census see Year Book No. 68, pages 133-135. Further details concerning the scope, coverage and survey methods (as well as more detailed statistics) of the labour force and supplementary surveys can be found in the publications listed at the end of this chapter.

#### Australian labour force framework

The need to reflect the dynamic structure and characteristics of the labour market and the changes required to respond to evolving socio-economic conditions and policy concerns have resulted in significant modifications to the original labour force survey framework that was developed in the 1960s. An ever-increasing demand to obtain information concerning underemployment and information on persons wanting work but not defined as unemployed has led to improvements to the conceptual basis of the Australian labour force framework. The modified framework is set out schematically on page 138.

#### Characteristics of the labour force

The size and composition of the labour force is not static over time. Growth of the labour force is due to an increase/decrease in labour force participation or in the population aged 15 and over. The table below sets out the growth of the labour force by source for the period August 1980-1985.

**LABOUR FORCE: SOURCES OF GROWTH, AUGUST 1980 TO AUGUST 1985**  
(Per cent)

Year ending August	Males			Females			Persons		
	Proportion of change due to			Proportion of change due to			Proportion of change due to		
	Percentage change in labour force	Population growth	Labour force participation	Percentage change in labour force	Population growth	Labour force participation	Percentage change in labour force	Population growth	Labour force participation
1980 . . . . .	1.8	1.7	0.1	6.2	1.8	4.4	3.4	1.8	1.6
1981 . . . . .	1.6	2.0	-0.4	1.3	2.1	-0.8	1.5	2.1	-0.6
1982 . . . . .	0.9	2.1	-1.2	1.1	2.1	-1.0	1.0	2.1	-1.1
1983 . . . . .	0.9	1.8	-0.9	2.0	1.8	0.2	1.3	1.8	-0.5
1984 . . . . .	1.4	1.6	-0.2	3.0	1.6	1.4	2.0	1.6	0.4
1985 . . . . .	1.0	1.6	-0.6	4.0	1.6	2.4	2.1	1.6	0.5

# THE AUSTRALIAN LABOUR FORCE FRAMEWORK

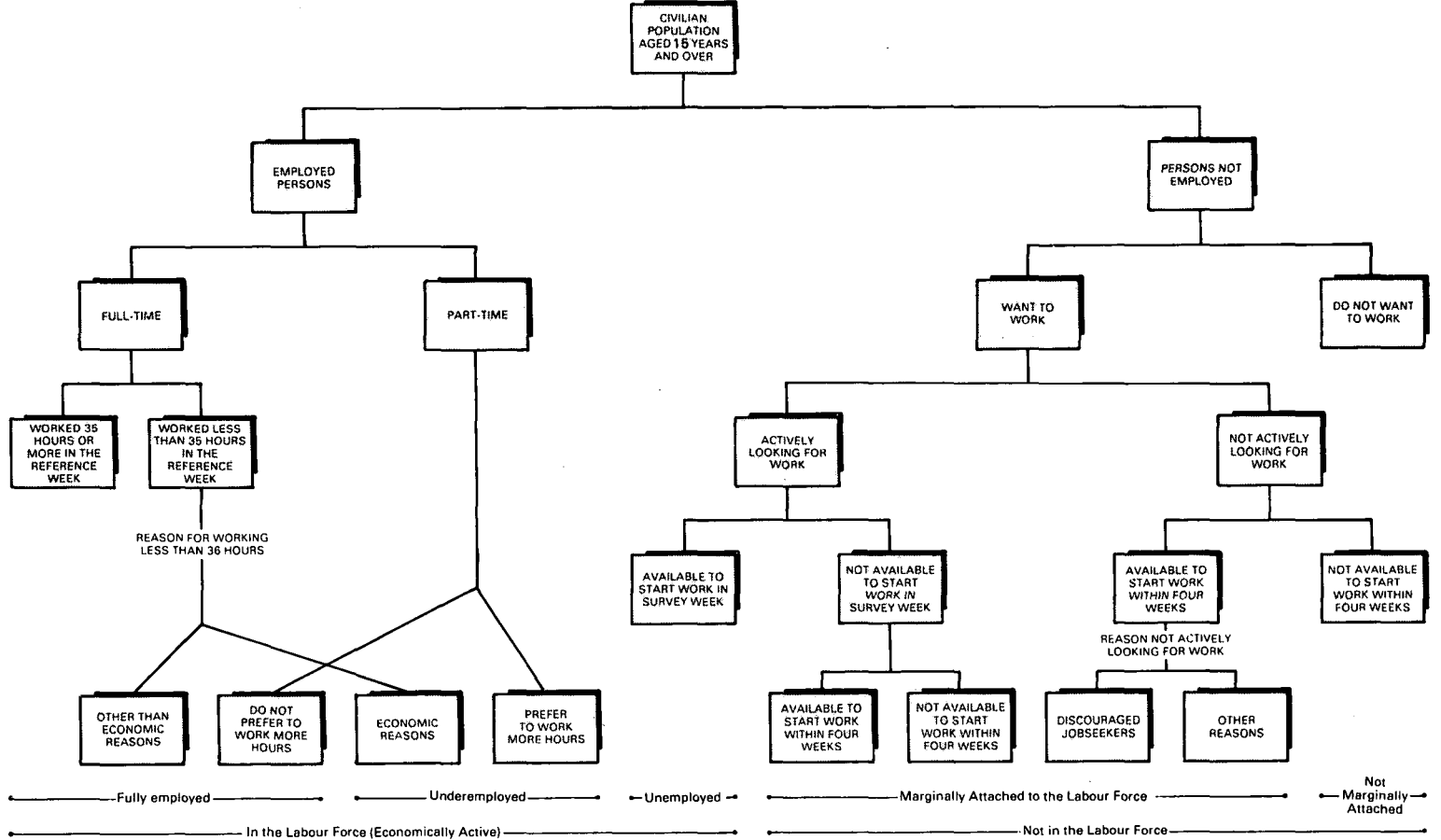
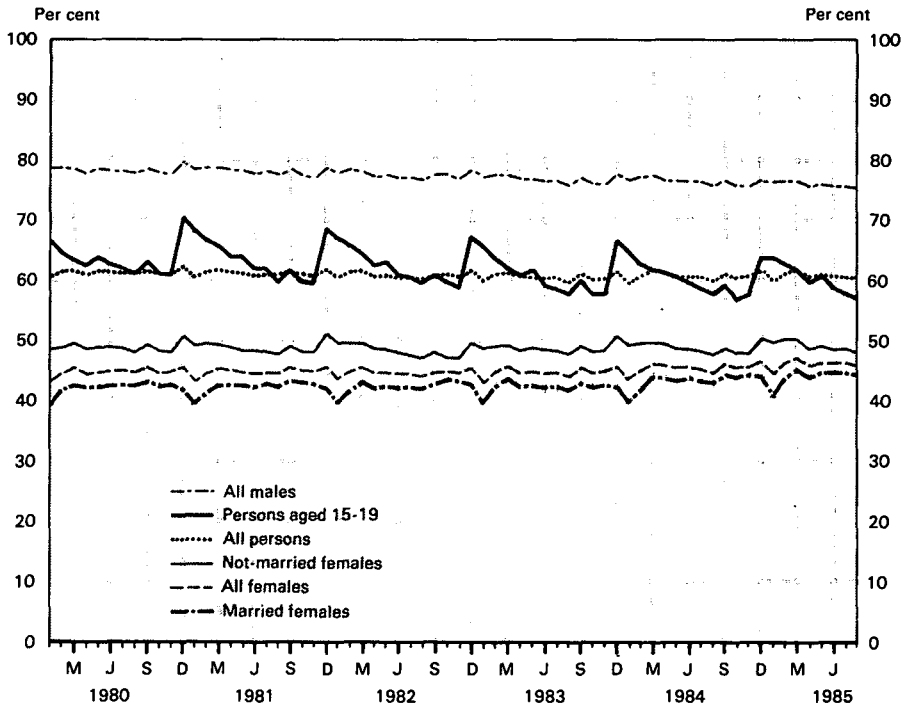


PLATE 17

One of the most important labour force measurements is the participation rate, which represents the proportion of the working age population who are in the labour force. Analysis of the participation rates provides the basis for monitoring changes in the size and composition of labour supply, particularly in terms of age, sex and marital status.

**LABOUR FORCE PARTICIPATION RATES**

(THE LABOUR FORCE IN EACH GROUP AS A PERCENTAGE OF THE CIVILIAN POPULATION AGED 15 AND OVER IN THE SAME GROUP)



**PLATE 18**

The following two tables provide more detailed information on the labour force status of persons. The first table presents the age and sex composition of the total labour force as at June 1985. The second table shows changes in labour force status over time.

**CIVILIAN LABOUR FORCE, BY AGE, JUNE 1985**

Age group	Number ('000)				Participation rate (per cent)					
	Females				Persons	Females				
	Males	Married	Not married	Total		Males	Married	Not married	Total	Persons
15-64 . . . . .	4,380.2	1,596.3	1,181.3	2,777.6	7,157.7	84.2	49.2	62.7	54.2	69.3
15-19 . . . . .	396.2	12.5	354.2	366.7	762.9	59.8	46.4	57.9	57.4	58.6
20-24 . . . . .	598.0	151.4	336.7	488.1	1,086.1	90.3	59.2	83.6	74.1	82.2
25-34 . . . . .	1,204.8	496.9	235.3	732.3	1,937.1	94.7	52.0	74.9	57.7	76.2
35-44 . . . . .	1,037.6	535.8	123.8	659.6	1,697.2	94.2	60.5	65.7	61.4	78.0
45-54 . . . . .	706.3	302.0	78.8	380.8	1,087.1	89.9	50.1	51.9	50.5	70.6
55-59 . . . . .	291.2	69.4	32.5	101.9	393.2	76.9	25.3	33.5	27.5	52.4
60-64 . . . . .	146.1	28.3	19.8	48.1	194.1	42.9	11.6	16.9	13.3	27.7
65 and over . . . . .	63.0	8.7	9.2	17.9	80.9	9.3	2.4	1.6	1.9	5.0
<b>Total</b>	<b>4,443.1</b>	<b>1,605.0</b>	<b>1,190.5</b>	<b>2,795.5</b>	<b>7,238.6</b>	<b>75.6</b>	<b>44.6</b>	<b>48.3</b>	<b>46.1</b>	<b>60.6</b>

## CIVILIAN POPULATION AGED 15 AND OVER: LABOUR FORCE STATUS 1980-1985

June	Unemployed			Total	Labour force	Not in the labour force	Civilian population aged 15 years and over	Unemployment rate	Participation rate
	Employed	Looking for full-time work	Looking for part-time work						
—'000—									
—per cent—									
<b>MALES</b>									
1980	3,984.3	194.5	15.9	210.3	4,194.6	1,176.3	5,370.9	5.0	78.1
1981	4,074.4	170.1	12.4	182.5	4,256.9	1,219.2	5,476.0	4.3	77.7
1982	4,064.9	216.8	23.9	240.6	4,305.6	1,287.7	5,593.2	5.6	77.0
1983	3,924.5	407.9	16.5	424.5	4,349.0	1,346.6	5,695.6	9.8	76.4
1984	4,042.1	349.7	25.3	375.0	4,417.2	1,374.1	5,791.3	8.5	76.3
1985	4,078.0	341.9	23.2	365.1	4,443.1	1,435.6	5,878.7	8.2	75.6
<b>FEMALES</b>									
1980	2,285.6	146.1	52.9	199.0	2,484.6	3,054.2	5,538.8	8.0	44.9
1981	2,339.6	122.4	48.8	171.2	2,510.8	3,141.2	5,651.9	6.8	44.4
1982	2,349.3	152.9	58.1	211.0	2,560.3	3,209.4	5,769.7	8.2	44.4
1983	2,342.0	205.8	62.9	268.7	2,610.7	3,266.4	5,877.1	10.3	44.4
1984	2,456.6	189.5	69.5	259.1	2,715.7	3,258.4	5,974.1	9.5	45.5
1985	2,553.8	170.1	71.5	241.6	2,795.5	3,268.4	6,063.9	8.6	46.1

The age at which a person leaves school and the level of educational attainment reached can affect the labour force status of that person. The following two tables set out the differential effects of these characteristics.

## LEAVERS FROM EDUCATIONAL INSTITUTIONS (a): LABOUR FORCE STATUS AND AGE, MAY 1984

Labour force status	Leavers aged 15 to 19			Leavers aged 20 to 24		
	Males	Females	Persons	Males	Females	Persons
—'000—						
Employed	86.8	75.4	162.1	23.9	22.5	46.4
Full-time	78.9	61.4	140.3	20.6	18.7	39.3
Part-time	7.9	13.9	21.8	3.3	3.8	7.1
Unemployed	26.4	24.1	50.6	6.3	5.6	12.0
In the labour force	113.2	99.5	212.7	30.2	28.2	58.4
Not in the labour force	5.2	8.0	13.2	*	*	*
<b>Total</b>	<b>118.4</b>	<b>107.5</b>	<b>225.9</b>	<b>31.2</b>	<b>29.9</b>	<b>61.1</b>
—per cent—						
Unemployment rate	23.3	24.3	23.8	21.0	20.0	20.5
Participation rate	95.6	92.6	94.2	97.0	94.2	95.6

(a) Leavers from educational institutions are persons who were full-time students at some time in the previous year but are not currently full-time students.

**CIVILIAN POPULATION AGED 15 AND OVER (a): EDUCATIONAL ATTAINMENT AND  
LABOUR FORCE STATUS, FEBRUARY 1985**

Educational attainment	Employed			Unem- ployed —'000—	In the labour force	Not in the labour force	Total	Partici- pation rate	Unem- ployment rate
	Full time	Part time	Total						
<b>MALES</b>									
With post-school qualifications	1,825.4	68.8	1,894.1	94.4	1,988.5	320.0	2,308.5	86.1	4.7
Degree	416.3	19.2	435.6	12.5	448.0	57.0	505.1	88.7	2.8
Trade, technical or other certificate	1,362.9	47.1	1,410.0	77.7	1,487.7	256.2	1,743.9	85.3	5.2
Other	46.1	*	48.6	*	52.8	6.7	59.5	88.7	*
Without post-school qualifications	2,011.9	130.8	2,142.7	284.0	2,426.7	803.0	3,229.7	75.1	11.7
Attended highest level of secondary school available	459.6	45.8	505.4	60.3	565.7	107.3	673.1	84.1	10.7
Did not attend highest level of secondary school available	1,546.9	84.8	1,631.7	222.9	1,854.7	681.8	2,536.5	73.1	12.0
Left at age									
18 years or over	26.8	*	29.7	5.5	35.2	6.8	41.9	83.8	15.6
16 or 17 years	519.5	24.3	543.7	73.8	617.5	76.9	694.4	88.9	11.9
14 or 15 years	846.6	46.6	893.1	125.3	1,018.4	424.4	1,442.8	70.6	12.3
13 years or under	154.1	11.1	165.2	18.4	183.6	173.7	357.3	51.4	10.0
Never attended school	5.3	*	5.5	*	6.3	13.9	20.1	31.2	*
Still at school	*	33.9	35.7	12.0	47.7	186.5	234.2	20.4	25.1
<b>Total</b>	<b>3,839.1</b>	<b>233.5</b>	<b>4,072.5</b>	<b>390.4</b>	<b>4,462.9</b>	<b>1,309.5</b>	<b>5,772.4</b>	<b>77.3</b>	<b>8.7</b>
<b>FEMALES</b>									
With post-school qualifications	700.8	311.1	1,011.8	70.6	1,082.4	584.6	1,667.0	64.9	6.5
Degree	175.0	52.2	227.2	11.2	238.4	73.0	311.4	76.6	4.7
Trade, technical or other certificate	501.2	241.6	742.8	53.7	796.5	482.4	1,278.8	62.3	6.7
Other	24.6	17.2	41.8	5.7	47.5	29.3	76.8	61.9	12.0
Without post-school qualifications	905.7	536.7	1,442.3	192.8	1,635.2	2,386.6	4,021.8	40.7	11.8
Attended highest level of secondary school available	219.1	108.8	327.9	41.2	369.1	286.7	655.7	56.3	11.2
Did not attend highest level of secondary school available	686.0	427.3	1,113.3	151.7	1,265.0	2,070.0	3,335.0	37.9	12.0
Left at age									
18 years or over	10.6	5.3	15.8	*	20.1	12.7	32.9	61.3	*
16 or 17 years	282.9	128.1	411.0	61.6	472.6	423.7	896.3	52.7	13.0
14 or 15 years	344.4	266.0	610.4	77.7	688.2	1,325.5	2,013.6	34.2	11.3
13 years or under	48.1	28.0	76.1	8.0	84.1	308.1	392.2	21.4	9.5
Never attended school	*	*	*	*	*	30.0	31.1	*	*
Still at school	*	48.9	49.6	19.9	69.4	165.5	234.9	29.6	28.6
<b>Total</b>	<b>1,607.1</b>	<b>896.6</b>	<b>2,503.7</b>	<b>283.2</b>	<b>2,787.0</b>	<b>3,136.7</b>	<b>5,923.7</b>	<b>47.0</b>	<b>10.2</b>

(a) Excludes students boarding at school, some patients in hospitals and sanatoria and inmates of reformatories, jails, etc.

In the light of the changing economic and social conditions of recent years, there is increasing concern whether the labour offered by individuals can be considered to be 'adequately utilised' by the labour market. A person's labour is deemed to be underutilised if the person is either unemployed or underemployed. Underemployment is deemed to exist when a person who usually works full time does not work full time in the reference period for economic reasons, which includes stand downs, short time, or insufficient work, or when a person who worked part-time indicated a preference to work more hours.

Underutilisation, underemployment and unemployment are summarised in the diagram below in which each category is expressed as a percentage of the labour force.

### EMPLOYMENT

This section provides a statistical summary of employment in Australia. Broadly, a person is considered to be employed if he or she is doing any work at all, regardless of the number of hours worked. In the statistics, employment is presented according to the demographic characteristics of employed persons, their occupation and industry, hours worked and whether they are full-time or part-time workers. Data for employed wage and salary earners by whether they work in the private or government sector and estimates for apprentices and qualified tradespersons are also included in this section. Most of the statistics on employment have been derived from the ABS monthly labour force survey, the exception being the two tables on employed wage and salary earners by sector which were derived from the quarterly survey of employment and earnings.



By relating employment levels to population levels, the magnitude of job growth in the economy can be evaluated. The measure relating these two levels is the employment/population ratio. Its usefulness lies in the fact that while movements in the employment level reflect *net* changes in the levels of persons holding jobs, movements in the ratio reflect *net* changes in the number of jobholders relative to changes in the size of the population. Note that while a rise in employment may not appear as a rise in the ratio because of continuous population growth, a decrease in employment will always appear as a fall in the ratio.

EMPLOYED PERSONS: EMPLOYMENT/POPULATION RATIOS (a), JUNE 1980-1985  
(Per cent)

June	Age group (years)								Total
	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65 and over	
MALES									
1980 . . . . .	55.3	83.5	91.7	93.0	89.1	79.2	51.4	10.6	74.2
1981 . . . . .	57.4	84.9	91.8	93.4	88.7	77.7	48.8	10.7	74.4
1982 . . . . .	53.5	81.3	90.8	92.0	87.9	77.7	46.3	9.3	72.5
1983 . . . . .	46.9	74.5	87.4	89.5	84.5	72.3	41.3	9.5	68.9
1984 . . . . .	47.8	76.3	88.1	90.3	85.7	75.4	41.0	9.1	69.8
1985 . . . . .	48.2	79.1	87.4	89.5	85.5	71.2	39.4	9.3	69.4
FEMALES									
1980 . . . . .	49.3	63.9	49.2	55.9	46.1	27.6	13.6	3.2	41.3
1981 . . . . .	50.2	64.0	49.9	56.0	47.2	29.0	9.8	2.3	41.4
1982 . . . . .	46.9	63.3	49.4	55.5	47.1	27.1	10.3	2.5	40.7
1983 . . . . .	45.1	63.3	48.6	54.0	45.1	26.5	12.3	2.4	39.9
1984 . . . . .	46.1	63.7	50.3	55.9	48.4	28.4	11.5	2.5	41.1
1985 . . . . .	46.9	66.1	53.1	57.7	48.2	25.9	13.2	1.9	42.1
PERSONS									
1980 . . . . .	52.3	73.7	70.5	74.8	68.1	53.2	31.7	6.3	57.5
1981 . . . . .	53.8	74.5	70.9	75.0	68.4	53.3	28.4	5.9	57.6
1982 . . . . .	50.2	72.3	70.1	74.0	68.0	52.4	27.5	5.4	56.4
1983 . . . . .	46.0	68.9	68.0	72.3	65.2	49.5	26.2	5.4	54.1
1984 . . . . .	46.9	70.0	69.2	73.4	67.4	52.1	25.7	5.2	55.2
1985 . . . . .	47.6	72.6	70.2	73.8	67.3	48.7	25.9	5.0	55.5

(a) Employment/population ratio for any group is the number of employed persons expressed as a percentage of the civilian population aged 15 and over in the same group.

### UNDERUTILISATION, UNDEREMPLOYMENT AND UNEMPLOYMENT RATES, AUGUST 1980-85

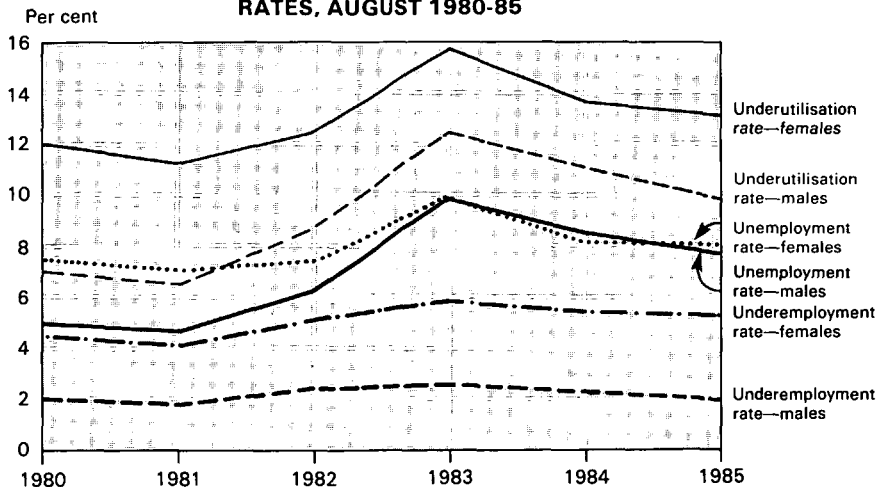


PLATE 19

The table below presents the status of worker for employed persons. Employers, self-employed persons and wage and salary earners are those who, during the survey week, worked for one hour or more for pay, profit, commission or payment in kind in a job or a business, or on a farm. Unpaid family helpers are those who, during the survey week, worked for 15 hours or more without pay in a family business or on a farm.

EMPLOYED PERSONS: STATUS OF WORKER, AUGUST 1980 TO AUGUST 1985  
(<sup>'000</sup>)

August	Employers	Self-employed	Wage and salary earners	Unpaid family helpers	Total
1980 . . . . .	366.6	648.4	5,241.5	24.8	6,281.4
1981 . . . . .	345.3	643.1	5,378.6	26.7	6,393.7
1982 . . . . .	353.2	647.0	5,354.3	24.9	6,379.3
1983 . . . . .	321.0	653.1	5,242.5	24.5	6,241.1
1984 . . . . .	335.4	681.8	5,423.8	21.2	6,462.3
1985 . . . . .	349.7	709.7	5,559.1	27.6	6,646.1

A measure of the relative importance of an industry is the size of its workforce. Also of interest is the work effort of that workforce as measured by hours worked. Taken together, employment and hours worked by industry serve as an indicator of labour supplied to that industry. The following table shows the distribution of employed persons by industry and average hours worked.

EMPLOYED PERSONS BY INDUSTRY AND AVERAGE WEEKLY HOURS WORKED, MAY 1985

Industry	Number ( <sup>'000</sup> )			Average weekly hours worked		
	Males	Females	Persons	Males	Females	Persons
Agriculture, forestry, fishing and hunting . . . . .	284.7	109.0	393.7	51.3	28.6	45.0
Mining . . . . .	86.5	7.2	93.7	38.8	33.3	38.4
Manufacturing . . . . .	841.5	295.5	1,137.0	39.0	32.4	37.3
Food beverages and tobacco . . . . .	123.6	51.7	175.4	38.2	32.0	36.4
Metal products . . . . .	175.2	28.0	203.2	38.6	30.7	37.5
Other manufacturing . . . . .	542.7	215.7	758.4	39.4	32.7	37.5
Electricity, gas and water . . . . .	121.9	11.1	132.9	34.7	30.6	34.4
Construction . . . . .	422.8	62.2	485.1	39.3	20.3	36.8
Wholesale and retail trade . . . . .	738.8	579.7	1,318.5	41.1	28.9	35.7
Transport and storage . . . . .	308.7	57.1	365.8	39.4	30.2	38.0
Communication . . . . .	107.0	39.8	146.9	34.7	30.0	33.4
Finance, property and business services . . . . .	351.2	301.0	652.2	39.6	30.1	35.2
Public administration and defence . . . . .	202.9	121.0	323.9	35.2	31.5	33.8
Community services . . . . .	425.3	715.6	1,140.9	36.8	28.7	31.7
Recreation, personal and other services . . . . .	192.4	249.4	441.8	39.5	28.1	33.1
<b>Total . . . . .</b>	<b>4,083.8</b>	<b>2,548.5</b>	<b>6,632.3</b>	<b>39.7</b>	<b>29.3</b>	<b>35.7</b>

The following table sets out the distribution of employed persons across occupations.

EMPLOYED PERSONS BY OCCUPATION, MAY 1985  
(<sup>'000</sup>)

Occupation	Males	Married females	All females	Persons
Professional technical, etc. . . . .	569.1	274.6	459.6	1,028.7
Administrative, executive and managerial . . . . .	382.7	54.2	76.0	458.7
Clerical . . . . .	337.5	486.1	893.3	1,230.8
Sales . . . . .	278.9	170.6	326.8	605.8
Farmers, fishermen, timbergetters, etc. . . . .	334.6	89.6	107.4	442.0
Miners, quarryworkers, etc. . . . .	33.0	*	*	33.4
Transport and communication . . . . .	281.1	26.2	44.8	325.8
Trades persons, production-process workers and labourers, n.e.c. . . . .	1,635.4	152.2	225.0	1,860.5
Service, sport and recreation . . . . .	231.4	257.0	415.1	646.5
<b>Total . . . . .</b>	<b>4,083.8</b>	<b>1,510.8</b>	<b>2,548.5</b>	<b>6,632.3</b>

Full-time workers are those who usually work 35 hours or more a week or who worked 35 hours or more during the survey week. Part-time workers are those who usually work less than 35 hours a week and who did so during the survey week. Estimates of these workers by sex and age are shown in the following table.

**EMPLOYED PERSONS: FULL-TIME AND PART-TIME WORKERS BY AGE, JUNE 1985**  
(\*000)

	<i>Age group (years)</i>								<i>Total</i>
	<i>15-19</i>	<i>20-24</i>	<i>25-34</i>	<i>35-44</i>	<i>45-54</i>	<i>55-59</i>	<i>60-64</i>	<i>65 and over</i>	
<b>MALES</b>									
Full-time workers . . . . .	246.8	485.1	1,068.5	958.6	649.9	256.3	119.9	36.2	3,821.3
Part-time workers . . . . .	72.5	39.0	42.8	26.9	21.8	13.1	14.2	26.4	256.8
<b>Total . . . . .</b>	<b>319.3</b>	<b>524.0</b>	<b>1,111.3</b>	<b>985.5</b>	<b>671.7</b>	<b>269.5</b>	<b>134.1</b>	<b>62.6</b>	<b>4,078.0</b>
<b>FEMALES</b>									
Full-time workers . . . . .	189.8	361.4	422.2	334.0	206.4	55.3	26.0	5.3	1,600.5
Part-time workers . . . . .	110.2	73.8	251.9	285.5	157.5	40.6	21.6	12.2	953.4
<b>Total . . . . .</b>	<b>300.0</b>	<b>435.2</b>	<b>674.1</b>	<b>619.6</b>	<b>363.9</b>	<b>96.0</b>	<b>47.6</b>	<b>17.4</b>	<b>2,553.8</b>

Estimates of employed wage and salary earners by sector are contained in the following tables. The estimates shown are derived from the quarterly survey of employment and earnings.

**EMPLOYED WAGE AND SALARY EARNERS: SECTOR BY STATES AND TERRITORIES, JUNE 1985**  
(\*000)

<i>Sector</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Private . . . . .	1,306.6	1,026.2	537.5	310.6	322.8	90.4	31.4	43.8	3,669.2
Government . . . . .	558.7	439.7	258.9	152.1	156.3	51.6	21.2	69.7	1,708.1
Commonwealth . . . . .	134.1	101.6	50.4	37.2	26.7	10.2	4.7	69.7	434.3
State . . . . .	363.8	296.4	179.6	106.6	118.8	37.9	15.7(a)	..	1,119.2
Local . . . . .	60.9	41.6	28.9	8.3	10.7	3.5	0.9	..	154.7
<b>Total . . . . .</b>	<b>1,865.4</b>	<b>1,465.8</b>	<b>796.4</b>	<b>462.7</b>	<b>479.0</b>	<b>141.9</b>	<b>52.6</b>	<b>113.5</b>	<b>5,377.4</b>

(a) Northern Territory Government.

**EMPLOYED WAGE AND SALARY EARNERS: INDUSTRY BY SECTOR,  
SEPTEMBER 1984 TO JUNE 1985**  
(\*000)

<i>Industry</i>	<i>Private sector</i>				<i>Government sector</i>			
	<i>Sept. 1984</i>	<i>Dec. 1984</i>	<i>Mar. 1985</i>	<i>June 1985</i>	<i>Sept. 1984</i>	<i>Dec. 1984</i>	<i>Mar. 1985</i>	<i>June 1985</i>
Agriculture, forestry, fishing and hunting (a) . . . . .	..	..	..	..	12.0	11.3	11.1	9.3
Mining . . . . .	80.5	81.0	80.3	82.2	6.8	6.7	6.8	6.9
Manufacturing . . . . .	976.5	970.6	962.7	971.9	54.2	53.5	54.8	53.8
Electricity, gas and water . . . . .	6.0	5.8	5.8	5.9	134.4	135.2	134.9	134.2
Construction . . . . .	181.8	190.5	225.7	225.2	50.3	50.4	50.5	51.5
Wholesale and retail trade . . . . .	994.7	1,039.4	1,023.4	1,027.8	5.6	5.7	5.6	5.8
Transport and storage . . . . .	125.6	134.3	131.8	131.4	149.4	151.3	150.6	152.3
Communication . . . . .	—	—	—	—	128.1	130.9	133.4	132.9
Finance, property and business services . . . . .	460.8	470.8	484.2	490.5	94.9	96.4	98.7	99.5
Public administration and defence (b) . . . . .	—	—	—	—	297.7	297.6	297.7	303.5
Community services . . . . .	365.9	367.8	383.6	391.7	720.6	702.3	721.0	734.8
Health . . . . .	178.2	182.3	189.7	193.2	260.8	260.4	266.5	268.8
Education . . . . .	80.0	76.4	81.9	87.0	358.3	339.7	351.8	362.2
Other . . . . .	107.6	109.1	112.0	111.4	101.5	102.2	102.7	103.8
Recreation, personal and other services . . . . .	324.0	333.5	342.4	342.6	23.1	22.0	23.9	23.8
<b>Total all industry . . . . .</b>	<b>3,515.8</b>	<b>3,593.8</b>	<b>3,639.8</b>	<b>3,669.2</b>	<b>1,676.9</b>	<b>1,663.3</b>	<b>1,689.1</b>	<b>1,708.1</b>

(a) Out of scope of survey for private sector. (b) Excludes members of permanent defence forces and employees of overseas embassies, consulates etc.

A table on sector and industry of apprentices and the year of their apprenticeship follows. The data was derived from the transition from education to work supplementary survey conducted in May 1984.

APPRENTICES: SECTOR AND INDUSTRY, MAY 1984

('000)

	Year of apprenticeship				Total
	First	Second	Third	Fourth(a)	
<b>Sector—</b>					
Government . . . . .	6.9	5.3	5.4	5.2	22.8
Private(b). . . . .	25.1	24.7	42.0	27.4	119.2
<b>Industry—</b>					
Manufacturing . . . . .	8.3	10.4	16.1	12.1	46.9
Electricity, gas and water . . . . .	*	*	*	*	7.2
Construction . . . . .	4.7	3.9	5.9	7.1	21.6
Wholesale and retail trade . . . . .	5.3	6.0	11.8	5.5	28.5
Transport and storage, communication . . . . .	*	*	*	*	5.7
Community services . . . . .	*	*	*	*	4.8
Recreation, personal and other services . . . . .	5.0	3.8	5.7	*	16.9
Other(c) . . . . .	3.7	*	*	*	10.4
<b>Total . . . . .</b>	<b>32.0</b>	<b>30.0</b>	<b>47.3</b>	<b>32.7</b>	<b>142.0</b>

(a) Includes a small number of fifth year apprentices. (b) Includes a small number of persons for whom sector could not be determined. (c) Includes agriculture etc; mining; finance, property and business services; and public administration and defence.

UNEMPLOYMENT

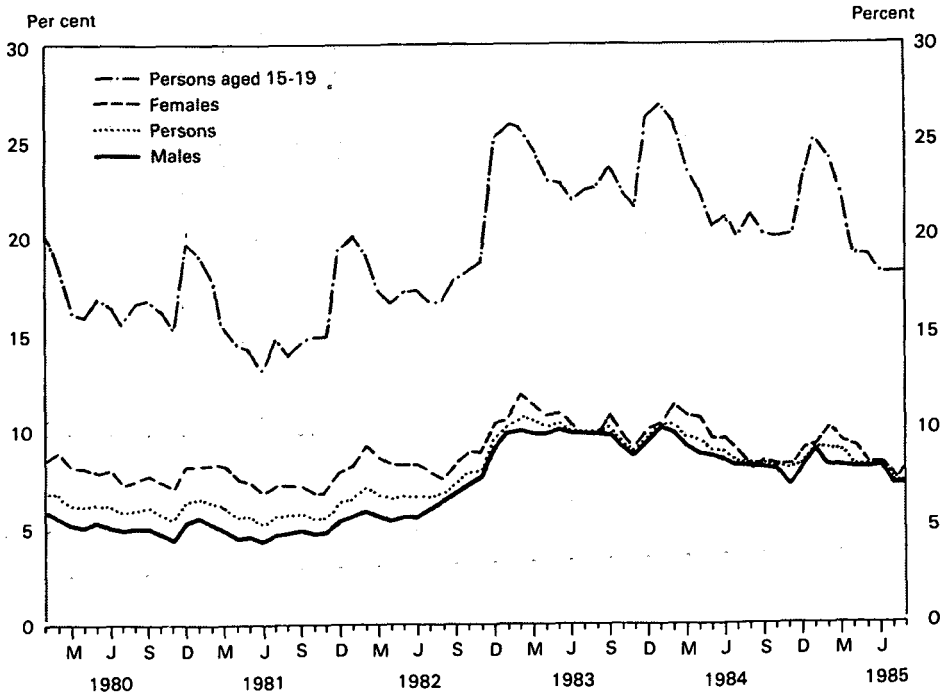
The unemployment statistics presented in this section have been derived from the ABS monthly labour force survey and its supplementaries.

Broadly a person is considered to be unemployed if he or she satisfies three criteria—not employed, available for work, and taking active steps to find work. The most important characteristics presented include their demographic composition, the duration of unemployment and their educational qualifications. Also shown are some summary statistics on job vacancies.

Measures of unemployment provide one indicator of the underutilization of labour. The two most important measures are the number of persons unemployed and the unemployment rate. The unemployment rate is defined as the number of unemployed expressed as a percentage of the size of the labour force.

UNEMPLOYMENT RATES

(THE UNEMPLOYMENT IN EACH GROUP AS A PERCENTAGE OF CIVILIAN LABOUR FORCE IN THE SAME GROUP)



By examining particular groups and characteristics of the unemployed, various economic and social aspects of unemployment can be analysed. While the aggregate unemployment rates shown above are important overall indicators, full-time and part-time unemployment levels and rates for different age groups by sex and marital status are also important. This information is set out in the table below, along with whether those aged 15-24 are looking for their first job.

**UNEMPLOYED PERSONS: AGE AND WHETHER LOOKING FOR  
FULL-TIME OR PART-TIME WORK, JUNE 1985**

Age	Number unemployed ('000)				Unemployment rate (per cent)			
	Males	Married females	All females	Persons	Males	Married females	All females	Persons
<b>LOOKING FOR FULL-TIME WORK</b>								
<b>Total</b>	<b>341.9</b>	<b>53.0</b>	<b>170.1</b>	<b>512.0</b>	<b>8.2</b>	<b>6.2</b>	<b>9.6</b>	<b>8.6</b>
<i>Aged 15-19</i>	64.1	*	53.2	117.3	20.6	*	21.9	21.2
Looking for first job	28.1	*	26.4	54.5	..	..	..	..
Attending school	4.0	*	4.5	8.5	n.a.	n.a.	n.a.	n.a.
<i>Aged 20 and over</i>	277.8	50.4	116.9	394.7	7.2	6.0	7.7	7.3
20-24	70.8	7.9	42.1	112.9	12.7	7.1	10.4	11.8
Looking for first job	5.8	*	*	9.1	..	..	..	..
25-34	89.9	18.4	36.4	126.3	7.8	7.1	7.9	7.8
35-44	51.1	14.8	23.4	74.5	5.1	5.6	6.6	5.5
45-54	33.8	7.5	11.3	45.0	4.9	4.7	5.2	5.0
55 and over	32.3	*	3.7	36.0	7.3	*	4.1	6.7
<i>Aged 15-64</i>	341.6	52.8	169.9	511.5	8.3	6.2	9.6	8.7
<b>LOOKING FOR PART-TIME WORK</b>								
<b>Total</b>	<b>23.2</b>	<b>42.8</b>	<b>71.5</b>	<b>94.7</b>	<b>8.3</b>	<b>5.7</b>	<b>7.0</b>	<b>7.3</b>
<i>Aged 15-19</i>	12.8	*	13.4	26.2	15.0	*	10.9	12.5
Attending school	8.0	*	10.3	18.3	14.8	*	14.4	14.5
<i>Aged 20 and over</i>	10.4	42.8	58.1	68.5	5.4	5.7	6.4	6.3
20-24	*	5.4	10.8	14.0	*	13.4	12.8	11.0
25-34	3.5	17.1	21.8	25.3	7.7	7.2	8.0	7.9
35-44	} 3.7	{ 14.6	16.6	17.6	4.0	{ 5.3	5.5	5.3
45 and over								
<i>Aged 15-64</i>	23.1	42.8	71.3	94.4	9.1	5.7	7.0	7.5

**UNEMPLOYED PERSONS : DURATION OF UNEMPLOYMENT,  
JUNE 1980 TO JUNE 1985**

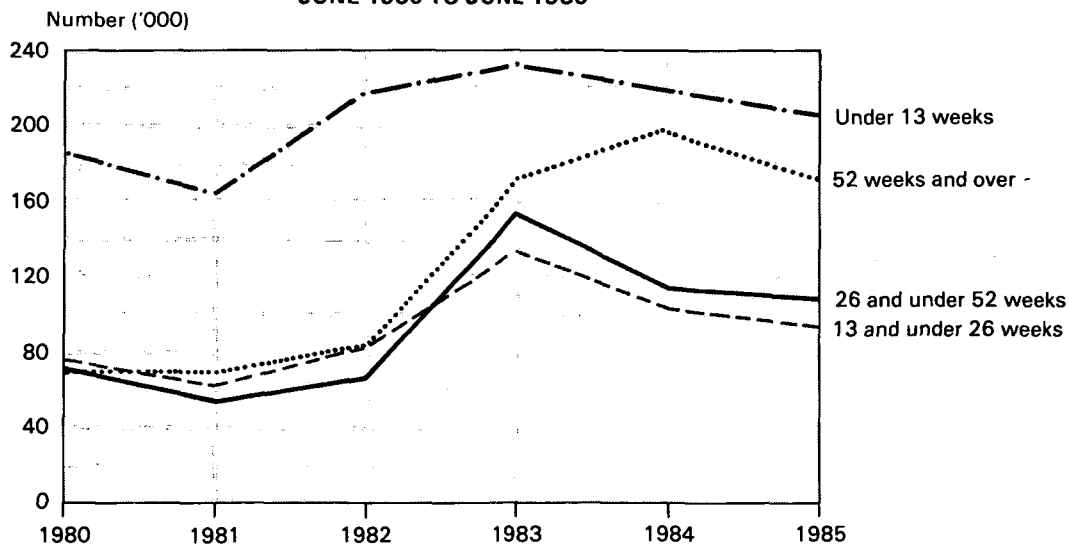


PLATE 21

An important indicator of the severity of unemployment is the length of time a person is unemployed. Two views are presented—the chart depicts the increase in each duration of unemployment category for 1980-85 while the table shows a more detailed snapshot as at June 1985. Note that in each case only current and continuing periods of unemployment are shown rather than completed spells. This is because, in the monthly labour force survey, duration of unemployment is the period from the time a person began looking for work or was laid off to the end of the survey week and only applies if the person is still unemployed.

## UNEMPLOYED PERSONS: DURATION OF UNEMPLOYMENT AND AGE, JUNE 1985

Duration of unemployment (weeks)	Age group (years)					Married	Not married	Looking for	
	15-19	20-24	25-34	34-54	Total(a)			Full- time work	Part- time work
			—'000—						
Under 2 . . . . .	10.2	6.9	10.2	10.0	39.2	16.4	22.8	25.4	13.8
2 and under 4 . . . . .	14.1	11.1	13.9	10.8	51.6	21.2	30.4	35.1	16.5
4 and under 8 . . . . .	15.3	13.8	14.5	11.6	56.7	23.3	33.5	46.0	10.8
8 and under 13 . . . . .	14.9	12.4	15.6	14.6	59.7	23.3	36.4	47.7	12.0
13 and under 26 . . . . .	26.5	20.3	26.2	18.2	94.0	33.6	60.4	79.9	14.1
26 and under 39 . . . . .	30.5	18.5	19.0	15.2	86.5	26.5	59.9	74.3	12.2
39 and under 52 . . . . .	4.7	5.6	3.8	6.5	22.7	9.9	12.7	22.0	*
52 and under 65 . . . . .	6.3	9.3	10.9	14.1	45.4	19.2	26.3	39.6	5.9
65 and under 104 . . . . .	10.8	7.7	8.7	6.3	37.2	13.1	24.1	34.2	*
104 and over . . . . .	10.2	21.2	28.7	36.2	113.8	52.7	61.1	107.9	5.9
<b>Total . . . . .</b>	<b>143.5</b>	<b>126.9</b>	<b>151.6</b>	<b>143.6</b>	<b>606.7</b>	<b>239.1</b>	<b>367.6</b>	<b>512.0</b>	<b>94.7</b>
			—weeks—						
Average duration—									
Mean . . . . .	30.3	46.0	49.0	63.3	50.3	55.1	47.2	55.1	24.4
Median . . . . .	21.1	25.0	23.0	26.1	26.0	26.0	26.0	26.1	8.1

(a) Includes persons aged 55 and over, details for whom are not shown separately.

Also of interest are the industry and occupation of their last full-time job. These estimates are set out in the table which follows.

## UNEMPLOYED PERSONS: INDUSTRY AND OCCUPATION OF LAST FULL-TIME JOB, MAY 1985

	Total ('000)			Unemployment rate (per cent)		
	Males	Females	Persons	Males	Females	Persons
Had worked full time for two weeks or more in the last two years . . . . .	218.1	101.7	319.7	5.1	3.8	4.6
Industry—						
Agriculture, forestry, fishing and hunting	17.1	*	20.2	5.7	*	4.9
Agriculture and services to agriculture	14.2	*	16.8	5.1	*	4.3
Manufacturing . . . . .	54.4	16.7	71.1	6.1	5.3	5.9
Food, beverages and tobacco . . . . .	9.2	3.8	13.1	6.9	6.9	6.9
Metal products . . . . .	14.5	*	15.5	7.6	*	7.1
Other manufacturing . . . . .	30.7	11.8	42.5	5.4	5.2	5.3
Construction . . . . .	34.6	*	36.8	7.6	*	7.0
Wholesale and retail trade . . . . .	44.8	30.6	75.4	5.7	5.0	5.4
Wholesale trade . . . . .	12.9	6.0	18.9	4.4	4.8	4.6
Retail trade . . . . .	31.9	24.6	56.5	6.5	5.1	5.8
Transport and storage . . . . .	13.1	*	15.4	4.1	*	4.1
Finance, property and business services . . . . .	8.6	8.2	16.7	2.4	2.6	2.5
Public administration and defence . . . . .	9.6	4.9	14.5	4.5	3.9	4.3
Community services . . . . .	8.8	16.7	25.5	2.0	2.3	2.2
Recreation, personal and other services . . . . .	17.2	15.6	32.8	8.2	5.9	6.9
Other industries . . . . .	9.9	*	11.2	3.0	*	3.2

continued over

UNEMPLOYED PERSONS: INDUSTRY AND OCCUPATION OF LAST FULL-TIME JOB, MAY 1985—  
 (continued)

	Total ('000)			Unemployment rate (per cent)		
	Males	Females	Persons	Males	Females	Persons
<b>Occupation group—</b>						
Professional, technical, etc . . . . .	8.7	8.4	17.2	1.5	1.8	1.6
Clerical . . . . .	7.0	31.8	38.8	2.0	3.4	3.1
Sales . . . . .	12.9	17.6	30.5	4.4	5.1	4.8
Farmers, fishermen, etc . . . . .	22.8	*	26.1	6.4	*	5.6
Transport and communication . . . . .	17.3	*	18.2	5.8	2.0	5.3
Tradespersons, production-process workers and labourers, n.e.c. . . . .	124.3	15.7	140.0	7.1	6.5	7.0
Service, sport and recreation . . . . .	14.4	21.1	35.4	5.8	4.8	5.2
Other occupations . . . . .	10.7	*	13.5	2.5	*	2.7
Other (a) . . . . .	141.0	138.7	279.7	..	..	..
Looking for first job . . . . .	45.9	50.1	96.0	..	..	..
Looking for full-time work . . . . .	32.2	31.8	64.0	..	..	..
Other . . . . .	95.1	88.6	183.7	..	..	..
Stood down . . . . .	*	5.5	8.3	..	..	..
<b>Total . . . . .</b>	<b>361.8</b>	<b>245.8</b>	<b>607.7</b>	<b>8.1</b>	<b>8.8</b>	<b>8.4</b>

(a) Had never worked for two weeks or more in a full-time job or had not done so in the last two years; industry and occupation were not obtained for these persons.

The number of unemployed persons shown below will differ from the number of unemployed persons shown in *The Labour Force, Australia* (6203.0). This is because the latter includes persons who are waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the survey week (including the whole of the survey week) for reasons other than bad weather or plant breakdown. Active steps taken to find work (also shown below) comprise writing, telephoning or applying in person to an employer for work; answering a newspaper advertisement for a job; checking factory or Commonwealth Employment Service (CES) noticeboards; being registered with the CES; checking or registering with any other employment agency; advertising or tendering for work; and contacting friends or relatives.

 UNEMPLOYED PERSONS: ACTIVE STEPS TAKEN TO FIND FULL-TIME OR PART-TIME WORK,  
 JULY 1984

	Looking for full-time work				Looking for part-time work			
	Males	Females	Persons	(per cent)	Males	Females	Persons	(per cent)
<i>Active steps taken to find work during current period of unemployment</i>	—'000—				—'000—			
Registered with the CES and—								
Took no other active steps . . . . .	3.7	3.4	7.1	1.4	*	*	*	*
Contacted prospective employers . . . . .	285.8	126.6	412.4	80.3	4.7	16.0	20.8	28.1
Took other active steps . . . . .	25.7	10.3	35.9	7.0	*	*	3.4	4.6
<b>Total . . . . .</b>	<b>315.2</b>	<b>140.3</b>	<b>455.5</b>	<b>88.7</b>	<b>6.0</b>	<b>18.8</b>	<b>24.8</b>	<b>33.5</b>
Not registered with the CES and—								
Contacted prospective employers . . . . .	21.1	32.0	53.1	10.3	8.9	34.4	43.3	58.5
Took other active steps . . . . .	2.5	2.4	4.9	0.9	1.9	4.0	6.0	8.0
<b>Total . . . . .</b>	<b>23.6</b>	<b>34.4</b>	<b>57.9</b>	<b>11.3</b>	<b>10.8</b>	<b>38.4</b>	<b>49.2</b>	<b>66.5</b>
<b>Total . . . . .</b>	<b>338.8</b>	<b>174.6</b>	<b>513.4</b>	<b>100.0</b>	<b>16.8</b>	<b>57.2</b>	<b>74.0</b>	<b>100.0</b>

## JOB VACANCIES

Job vacancy statistics taken together with unemployment statistics assist in the assessment of the demand for labour. However, unemployment and job vacancy statistics should be regarded as complimentary indicators. This is because the monthly labour force survey (which collects unemployment) and the quarterly survey of employers (which collects job vacancies) utilise different collection methodologies, sample designs, definitions and concepts.

A job vacancy is a job available for immediate filling on the survey date and for which recruitment action had been taken by the employer. Recruitment action includes efforts to fill vacancies by advertising, by factory notices, by notifying government or private employment agencies or trade unions and by contacting, interviewing or selecting applicants already

registered with the enterprise or organisation. Excluded are jobs available only to existing employees of the organisation; vacancies to be filled by persons already hired or by promotion or transfer of existing employees; vacancies to be filled by employees returning from paid or unpaid leave or after industrial disputes; vacancies not available for immediate filling on the survey date; vacancies not available within the particular State or Territory to which the survey return relates; vacancies for work carried out under contract; and vacancies for which no effort is being made to fill the position.

**JOB VACANCIES: STATES AND TERRITORIES, 1980-1985**  
(<sup>'000</sup>)

Month	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1980 May . . . . .	13.0	8.1	3.0	1.4	2.2	0.8	0.5	0.8	29.8
1981 May . . . . .	18.5	8.3	3.1	1.0	3.2	0.5	0.7	0.5	35.7
1982 May . . . . .	9.0	7.6	3.9	1.2	2.2	0.4	0.2	0.8	25.3
1983 May . . . . .	6.9	5.3	1.7	1.0	*	0.3	0.3	0.6	17.5
November—old (a) . . . . .	7.8	4.5	2.0	1.3	1.4	0.7	0.3	0.9	19.1
—new (b) . . . . .	11.2	6.5	4.1	2.1	3.5	0.8	0.5	1.3	30.1
1984 May . . . . .	14.7	8.9	4.0	2.5	2.0	0.6	0.6	1.5	34.8
1985 May . . . . .	22.3	16.8	4.7	3.6	4.3	1.2	1.1	2.5	56.6

(a) Results from payroll tax based surveys.

(b) Result of sample surveys of employers.

**JOB VACANCY RATES(a): STATES AND TERRITORIES, 1980-1985**  
(per cent)

Month	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1980 May . . . . .	0.9	0.7	0.5	0.4	0.6	0.7	1.7	1.1	0.7
1981 May . . . . .	1.2	0.7	0.6	0.3	0.9	0.4	2.3	0.7	0.8
1982 May . . . . .	0.6	0.7	0.7	0.3	0.6	0.4	0.7	1.0	0.6
1983 May . . . . .	0.5	0.5	0.3	0.3	0.4	0.3	0.9	0.8	0.5
November—old(b) . . . . .	0.6	0.4	0.4	0.3	0.4	0.6	1.0	1.2	0.5
—new(c) . . . . .	0.7	0.5	0.5	0.5	*	0.7	*	1.3	0.6
1984 May . . . . .	0.8	0.7	0.5	0.6	*	*	1.1	1.4	0.7
1985 May . . . . .	1.2	1.2	0.6	0.8	1.0	0.9	2.3	2.3	1.1

(a) Job vacancy rate is calculated by expressing the number of job vacancies as a percentage of the number of employees plus vacancies. (b) Results from payroll tax based surveys. (c) Result of sample surveys of employers.

## PERSONS NOT IN THE LABOUR FORCE

Persons not in the labour force represent that group of the population who, during a particular week, are not employed or unemployed. Interest in this group centres primarily around their potential to participate in the labour force.

In this section, data came from the supplementary survey of persons not in the labour force. Attention is given to their demographic characteristics as well as focussing on their degree of attachment to the labour force. Aspects such as whether they want a job, or whether they are discouraged jobseekers are emphasised.

Details of the reasons why persons left their last job are presented below. The table also shows that most persons not in the labour force did not want work and, of those who did want work, the majority were available to start work. The most frequently mentioned reason people left their last job was retirement or the desire to no longer work.



**PERSONS NOT IN THE LABOUR FORCE(a): WANTING WORK AND REASON FOR LEAVING  
LAST JOB, SEPTEMBER 1984**  
(\*000)

Reason for leaving last job	Wanted to work		Total	Did not want to work	Total
	Available to start work within four weeks(b)	Not available to start work within four weeks			
Retrenched, made redundant/lost job . . . . .	83.6	16.3	99.9	152.5	252.5
Seasonal or temporary job . . . . .	57.7	15.1	72.8	104.4	177.2
Returned to studies . . . . .	15.3	16.8	32.1	53.2	85.3
Retired/did not want to work any longer . . . . .	40.7	5.6	46.3	943.5	989.7
Unsatisfactory work arrangements . . . . .	28.7	6.2	34.9	38.6	73.5
Own ill health or injury . . . . .	50.9	31.2	82.1	452.2	534.3
To get married . . . . .	40.6	16.9	57.5	474.1	531.6
Pregnancy/to have children . . . . .	147.4	64.8	212.2	327.4	539.7
To look after family, house or someone else . . . . .	39.1	12.3	51.4	167.2	218.6
Travel, moved house, spouse transferred . . . . .	62.5	16.6	79.1	111.6	190.6
Other reasons . . . . .	19.3	5.1	24.4	40.3	64.7
Never had a job . . . . .	100.8	72.4	173.2	557.1	730.3
Not asked(c) . . . . .	9.5	15.0	24.6	*	24.6
<b>Total . . . . .</b>	<b>696.1</b>	<b>294.3</b>	<b>990.4</b>	<b>3,422.1</b>	<b>4,412.5</b>

(a) Excludes students boarding at school, some patients in hospitals and sanatoria and inmates of reformatories, jails, etc. (b) Includes persons who did not know whether available to start work within four weeks. (c) Persons who had a job but, up to the end of the survey week, had been away from work without pay for four weeks or longer and had not been actively looking for work.

The remainder of the data presented in this section is based on the newly introduced concept of marginal attachment to the labour force. For a comprehensive discussion of this concept see *Employment, Underemployment and Unemployment, 1966-1983* (6246.0) and *Persons Not in the Labour Force, September 1984* (6220.0).

Persons with marginal attachment to the labour force are those who were not in the labour force in the survey week and wanted to work and were available to start work within four weeks; or were actively looking for work but were not available to start work within four weeks. Discouraged jobseekers, a subcategory of those with marginal attachment, are those persons who wanted to work and were available to start work within four weeks but whose main reason for not taking active steps to find work was that they believed they would not be able to find a job for any of the following reasons: considered by employers to be too young or too old; difficulties with language or ethnic background; lacked the necessary schooling, training, skills or experience; no jobs in their locality or line of work, or no jobs at all. A summary of the characteristics of these groups is shown in the following table.

**PERSONS NOT IN THE LABOUR FORCE WITH MARGINAL ATTACHMENT TO THE LABOUR  
FORCE, SEPTEMBER 1984**  
(\*000)

	Discouraged jobseekers			All persons who wanted to work and were available to start work within four weeks			All persons with marginal attachment to the labour force		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
<b>Total . . . . .</b>	<b>19.0</b>	<b>74.7</b>	<b>93.7</b>	<b>144.6</b>	<b>551.5</b>	<b>696.1</b>	<b>163.0</b>	<b>563.3</b>	<b>726.3</b>
Age group (years)—									
15-19 . . . . .	*	5.7	8.4	52.8	58.7	111.5	65.5	65.8	131.3
20-24 . . . . .	*	*	5.1	14.0	58.7	72.8	16.4	61.2	77.6
25-34 . . . . .	*	12.9	13.8	14.3	187.6	201.9	14.7	188.7	203.4
35-44 . . . . .	*	17.8	19.1	14.9	129.0	143.9	16.5	129.9	146.4
45-54 . . . . .	*	18.0	19.9	11.6	71.8	83.4	12.2	72.0	84.2
55-64 . . . . .	4.4	12.3	16.7	22.6	36.8	59.4	23.1	36.8	59.9
65 and over . . . . .	5.5	5.2	10.7	14.3	8.9	23.2	14.6	8.9	23.4

*continued over*

PERSONS NOT IN THE LABOUR FORCE WITH MARGINAL ATTACHMENT TO THE LABOUR FORCE, SEPTEMBER 1984—(continued)  
(‘000)

	<i>Discouraged jobseekers</i>			<i>All persons who wanted to work and were available to start work within four weeks</i>			<i>All persons with marginal attachment to the labour force</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
<b>Family status—</b>									
Member of a family . . . . .	14.1	62.8	76.9	116.2	495.9	612.1	130.6	505.8	636.4
Husband or wife . . . . .	8.9	48.1	57.0	48.6	360.6	409.2	51.3	362.4	413.7
With children aged 0-14 present . . . . .	*	24.8	25.5	16.7	271.8	288.5	18.7	273.3	292.0
Without children aged 0-14 present . . . . .	8.2	23.3	31.5	31.9	88.8	120.7	32.6	89.1	121.7
Not-married family head . . . . .	*	7.9	7.9	5.8	78.0	83.8	5.8	78.7	84.5
With children aged 0-14 present . . . . .	*	4.6	4.6	3.4	67.1	70.5	3.4	67.8	71.2
Without children aged 0-14 present . . . . .	*	3.2	3.2	*	10.9	13.3	*	10.9	13.3
Child of family head . . . . .	3.4	5.7	9.1	57.9	53.4	111.4	69.5	60.9	130.4
Other relative of family head . . . . .	*	*	3.0	3.9	3.9	7.8	4.0	3.9	7.9
Not a member of a family . . . . .	3.0	6.9	9.9	18.2	22.6	40.8	19.3	23.7	43.0
Living alone . . . . .	*	6.6	8.6	8.8	17.4	26.2	8.8	17.6	26.4
Not living alone . . . . .	*	*	*	9.4	5.2	14.6	10.5	6.1	16.6
Not family coded . . . . .	*	4.9	6.8	10.2	33.0	43.2	13.2	33.8	46.9
<b>Type of work preferred—</b>									
Preferred to work full-time . . . . .	9.6	13.6	23.2	69.0	85.7	154.6	83.4	93.5	176.9
Preferred to work part-time . . . . .	8.2	57.9	66.1	70.2	451.7	522.0	74.2	455.1	529.2
No preference . . . . .	*	3.2	4.5	5.4	14.1	19.5	5.5	14.8	20.2
<b>Whether looked for work in the last 12 months(a)—</b>									
Had not looked for work . . . . .	10.7	48.9	59.6	92.5	426.0	518.6	92.5	426.0	518.6
Had looked for work . . . . .	8.3	25.8	34.1	52.1	125.5	177.5	70.5	137.3	207.8
Less than 5 weeks ago . . . . .	*	6.1	8.0	21.2	44.1	65.3	39.6	55.9	95.5
5 and less than 8 weeks ago . . . . .	3.0	7.6	10.6	16.1	30.6	46.7	16.1	30.6	46.7
8 and less than 13 weeks ago . . . . .	*	4.9	6.0	5.4	20.3	25.7	5.4	20.3	25.7
13 and less than 52 weeks ago . . . . .	*	7.2	9.4	9.4	30.5	39.9	9.4	30.5	39.9
<b>Time since last job—</b>									
Had never had a job . . . . .	*	8.6	11.1	41.4	59.3	100.8	51.8	64.9	116.7
Had had a job . . . . .	16.6	66.0	82.6	103.2	492.2	595.3	111.3	498.4	609.7
Under 12 months . . . . .	4.3	7.9	12.2	46.1	96.5	142.7	51.5	101.2	152.7
Under 6 months . . . . .	*	4.4	6.8	27.8	56.4	84.2	29.1	58.3	87.4
6 and under 12 months . . . . .	*	3.5	5.4	18.4	40.1	58.5	22.4	42.9	65.3
1 and under 3 years . . . . .	4.0	13.4	17.5	27.3	105.3	132.6	29.5	105.8	135.3
3 and under 10 years . . . . .	6.7	23.4	30.1	25.5	181.8	207.3	26.1	182.5	208.7
10 years or more . . . . .	*	21.3	22.8	4.2	108.6	112.8	4.2	108.8	113.0
<b>Reason for leaving last job—</b>									
Retrenched/made redundant/lost job . . . . .	5.6	12.6	18.2	22.2	61.4	83.6	23.7	61.4	85.1
Seasonal or temporary job . . . . .	*	6.8	8.3	9.5	48.1	57.7	10.1	49.3	59.4
Returned to studies . . . . .	*	*	*	8.1	7.2	15.3	11.6	10.1	21.7
Retired/did not want to work any longer . . . . .	4.8	3.7	8.5	18.1	22.6	40.7	18.1	22.6	40.7
Unsatisfactory work arrangements . . . . .	*	*	3.5	6.4	22.3	28.7	6.7	22.4	29.1
Own ill health or injury . . . . .	*	5.9	6.8	20.5	30.4	50.9	21.8	30.5	52.3
To get married . . . . .	*	5.8	5.8	*	40.6	40.6	*	40.6	40.6
Pregnancy/to have children . . . . .	*	11.1	11.1	*	147.3	147.4	*	148.2	148.3

For footnotes see end of table.

PERSONS NOT IN THE LABOUR FORCE WITH MARGINAL ATTACHMENT TO THE LABOUR FORCE, SEPTEMBER 1984—(continued)  
( '000)

	<i>Discouraged-jobseekers</i>			<i>All persons who wanted to work and were available to start work within four weeks</i>			<i>All persons with marginal attachment to the labour force</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
To look after family, house or someone else . . . . .	*	5.0	5.0	*	37.1	39.1	*	37.2	39.4
Travel, moved house, spouse transferred. . . . .	*	9.7	12.0	8.7	53.8	62.5	8.9	54.2	63.1
Other reasons . . . . .	*	*	3.5	4.7	14.5	19.3	5.3	15.0	20.3
Never had a job . . . . .	*	8.6	11.1	41.4	59.3	100.8	51.8	64.9	116.7
Not asked (b) . . . . .	*	*	*	*	6.8	9.5	*	6.8	9.5

(a) Persons who had left a job in the last twelve months were only asked whether they had looked for work since that job.  
(b) Persons who had a job but, up to the end of survey week, had been away from work without pay for four weeks or longer and had not been actively looking for work.

The following chart depicts, for persons with marginal attachment to the labour force, their main reason for not actively looking for work. That is, whether they were not actively looking for work predominantly because of personal reasons, family reasons, or discouragement.

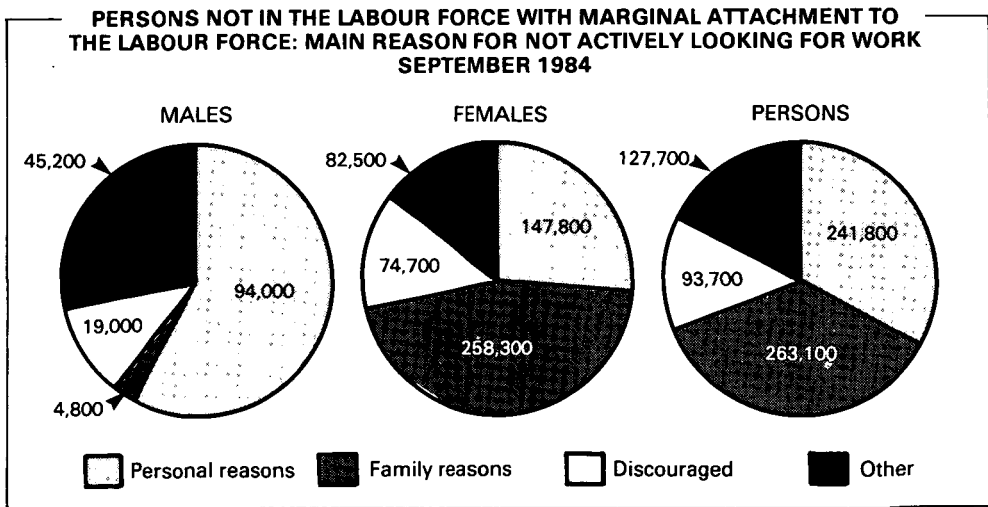


PLATE 22

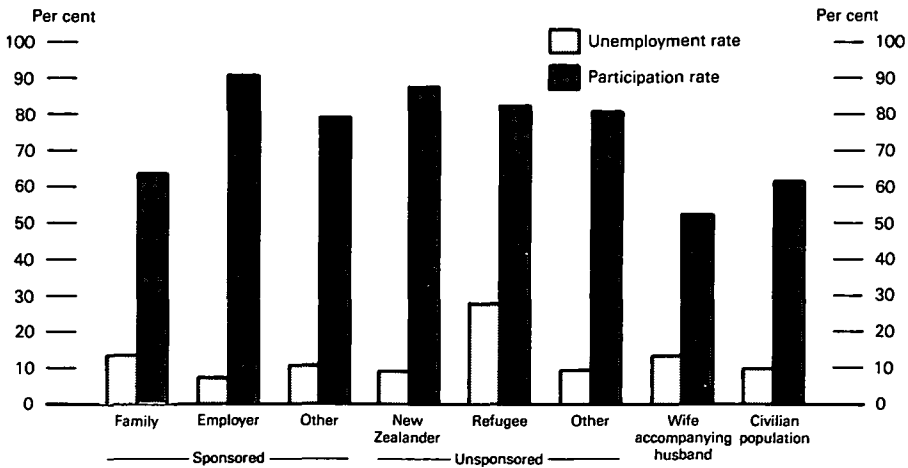
**LABOUR FORCE CHARACTERISTICS OF MIGRANTS**

Immigration is an important factor influencing present and future levels of labour market activity. Information on the labour force characteristics of migrants is obtained from the monthly labour force survey. Also additional data were obtained from the March 1984 supplementary survey on labour force participation of various categories of migrants (eg admitted for family reunion, employer sponsored, refugee). Some summary data from the survey are shown in the following tables and charts.

**MIGRANTS WHO ARRIVED IN AUSTRALIA AFTER 1960 AGED 18 AND OVER: LABOUR FORCE STATUS AND YEAR OF ARRIVAL, MARCH 1984**

Year of arrival	Employed			Unem- ployed	In the labour force	Not in the labour force	Total	Unemploy- ment rate	Partici- pation rate
	Full-time	Part-time	Total						
— '000 —									
— per cent —									
<b>MALES</b>									
1961-1970 . . . . .	220.1	5.2	225.3	23.8	249.1	46.4	295.5	9.5	84.3
1971-1980 . . . . .	193.8	4.7	198.5	21.9	220.4	22.9	243.3	9.9	90.6
1981-1984 . . . . .	66.6	4.2	70.8	17.5	88.2	14.6	102.9	19.8	85.8
<b>Total . . . . .</b>	<b>480.5</b>	<b>14.1</b>	<b>494.6</b>	<b>63.1</b>	<b>557.8</b>	<b>83.9</b>	<b>641.7</b>	<b>11.3</b>	<b>86.9</b>
<b>FEMALES</b>									
1961-1970 . . . . .	75.6	39.8	115.4	12.0	127.4	135.1	262.5	9.4	48.5
1971-1980 . . . . .	98.0	40.9	138.9	17.0	155.9	111.8	267.8	10.9	58.2
1981-1984 . . . . .	29.8	12.3	42.1	15.0	57.1	48.6	105.7	26.3	54.0
<b>Total . . . . .</b>	<b>203.4</b>	<b>93.0</b>	<b>296.4</b>	<b>44.0</b>	<b>340.5</b>	<b>295.6</b>	<b>636.0</b>	<b>12.9</b>	<b>53.5</b>

**MIGRANTS WHO ARRIVED IN AUSTRALIA AFTER 1960 AGED 18 AND OVER: MIGRATION CATEGORY, UNEMPLOYMENT RATE AND PARTICIPATION RATE, MARCH 1984**

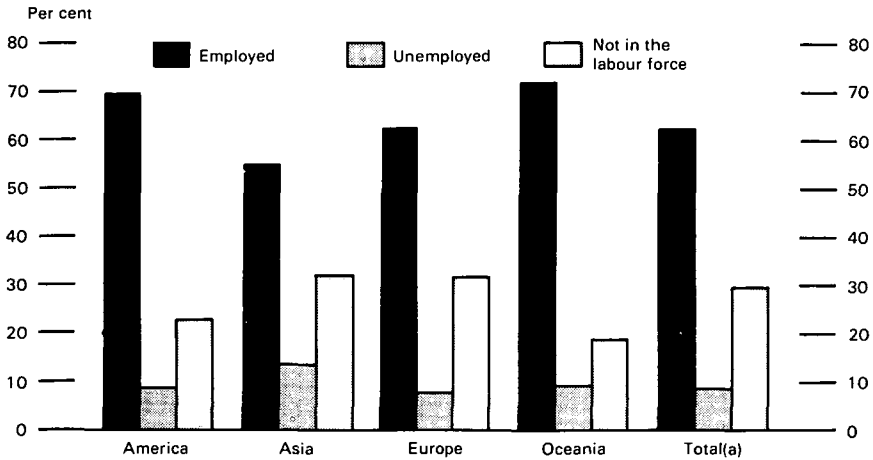


**PLATE 23**

**MIGRANTS WHO ARRIVED IN AUSTRALIA AFTER 1960 AGED 18 AND OVER : LABOUR FORCE STATUS AND AGE ON ARRIVAL, MARCH 1984**

Labour force status	Age on arrival (years)							Total
	18-24	25-34	35-44	45-54	55-59	60-64	65 and over	
<b>MALES</b>								
—'000—								
Employed . . . . .	178.6	205.0	90.1	18.0	*	*	*	494.6
Full-time . . . . .	174.2	199.6	86.8	17.3	*	*	*	480.5
Part-time . . . . .	4.4	5.4	3.4	*	*	*	*	14.1
Unemployed . . . . .	25.0	23.0	9.5	4.9	*	*	*	63.1
In the labour force . . . . .	203.6	228.0	99.6	22.9	*	*	*	557.8
Not in the labour force . . . . .	10.8	17.4	17.0	16.4	5.3	7.3	9.9	83.9
<b>Total</b> . . . . .	<b>214.4</b>	<b>245.3</b>	<b>116.6</b>	<b>39.3</b>	<b>7.6</b>	<b>8.1</b>	<b>10.4</b>	<b>641.7</b>
—per cent—								
Unemployment rate . . . . .	12.3	10.1	9.5	21.2	*	*	*	11.3
<b>FEMALES</b>								
—'000—								
Employed . . . . .	119.3	125.2	42.7	7.6	*	*	*	296.4
Full-time . . . . .	86.8	81.8	29.0	5.2	*	*	*	203.4
Part-time . . . . .	32.5	43.4	13.7	*	*	*	*	93.0
Unemployed . . . . .	15.6	20.2	6.4	*	*	*	*	44.0
In the labour force . . . . .	134.9	145.4	49.0	9.2	*	*	*	340.5
Not in the labour force . . . . .	85.4	84.3	54.0	30.2	12.5	14.0	15.2	295.6
<b>Total</b> . . . . .	<b>220.3</b>	<b>229.7</b>	<b>103.0</b>	<b>39.3</b>	<b>13.6</b>	<b>14.9</b>	<b>15.2</b>	<b>636.0</b>
—per cent—								
Unemployment rate . . . . .	11.5	13.9	13.0	*	*	*	*	12.9

**MIGRANTS WHO ARRIVED IN AUSTRALIA AFTER 1960 AGED 18 AND OVER : BIRTHPLACE AND LABOUR FORCE STATUS, MARCH 1984**



(a) Includes Africa

**PLATE 24**

## RETIREMENT INTENTIONS

In the September 1984 supplementary to the labour force survey, persons aged 45 and over were surveyed regarding their intention to retire from full-time work. The survey provides information on the potential flows out of the labour force and on the provision being made by persons for their future retirement. It will enable estimates to be made of the present and future impact of retirement (including early retirement) on the structure of the labour force. A summary of the results of the survey is shown in the following tables.

PERSONS AGED 45 AND OVER (a):  
RETIRED AND NOT RETIRED FROM FULL TIME WORK BY AGE, SEPTEMBER 1984  
(<sup>'000</sup>)

	Age at September 1984 (years)						Total
	45-49	50-54	55-59	60-64	65-69	70 and over	
Had retired from full-time work (b)	254.8	292.8	375.7	513.9	493.4	878.3	2,809.0
Had not retired from full-time work (c)	532.5	449.0	369.3	145.6	30.2	17.5	1,544.1
Did not ever intend to retire	37.6	37.4	32.3	20.2	11.1	12.2	150.8
Intended to retire	494.8	411.6	336.9	125.4	19.1	5.3	1,393.2
Age intended to retire (years)—							
45-49	3.7	..	..	..	..	..	3.7
50-54	19.4	6.2	..	..	..	..	25.6
55-59	44.1	33.4	14.4	..	..	..	91.9
60-64	112.6	108.3	101.8	15.8	..	..	338.6
65-69	152.3	148.1	138.9	76.3	4.6	..	520.3
70 and over	*	*	3.9	3.2	*	*	16.0
Did not know	159.9	112.9	78.0	30.1	12.8	3.4	397.2
<b>Total</b>	<b>787.3</b>	<b>741.8</b>	<b>745.0</b>	<b>659.6</b>	<b>523.6</b>	<b>895.8</b>	<b>4,353.0</b>

(a) Excludes persons who were institutionalised or permanently unable to work who were not in the scope of this survey.  
(b) Includes some persons who had never worked full-time. (c) Includes persons who had never worked full-time but who were looking for full-time work, would like full-time work or intended to take up full-time work at some time.

PERSONS AGED 45 AND OVER WHO INTEND TO RETIRE FROM FULL-TIME WORK: SEPTEMBER 1984  
(<sup>'000</sup>)

	Age intended to retire (years)						Persons(a)
	Males			Females			
	45-64	65 and over	Total(a)	45-59	60 and over	Total(a)	
<b>Total</b>	<b>273.7</b>	<b>514.3</b>	<b>1,059.4</b>	<b>66.3</b>	<b>141.8</b>	<b>333.9</b>	<b>1,393.2</b>
Expected main source of income at retirement—							
Superannuation	130.0	102.9	272.7	7.0	25.5	40.9	313.6
Life assurance and other schemes	4.5	6.7	15.9	*	*	*	17.9
Government pensions and benefits (b)	56.8	334.8	508.9	14.4	83.3	158.4	667.2
Investments	48.1	31.3	115.5	7.3	10.7	26.4	141.9
Savings/sale of assets	10.8	9.0	33.2	*	*	8.7	41.9
Part-time work	11.1	4.8	19.0	*	*	*	21.9
Dependent upon another person	*	*	4.1	32.3	11.0	64.6	68.7
Other (c)	11.2	23.4	90.0	*	6.9	30.1	120.1
Expected type of payment from retirement scheme—							
Belonged to a scheme	229.8	329.3	702.6	27.5	66.1	131.7	834.4
Lump sum only	109.6	191.0	367.4	19.0	32.1	71.2	438.6
Regular payments only	27.1	26.9	62.7	*	6.6	11.6	74.3
Lump sum and regular payments	44.8	22.8	76.0	3.4	7.7	12.9	88.9
No lump sum or regular payments	*	3.4	7.2	*	*	*	8.1
Did not know type of payments	46.7	85.3	189.3	*	19.2	35.1	224.4
Did not belong to a scheme (d)	43.9	184.9	356.8	38.8	75.7	202.1	558.9
Expected time until retirement (years)—							
4 or less	86.9	59.8	146.7	36.5	33.4	69.9	216.7
5 to 9	97.1	125.6	222.7	24.7	39.7	64.4	287.1
10 to 14	73.2	146.5	219.8	5.1	51.3	56.4	276.2
15 to 19	16.4	146.3	162.7	*	15.6	15.6	178.3
20 or more	..	36.1	36.1	..	*	*	37.8
Did not know	..	..	271.4	..	..	125.8	397.2

For footnotes see end of table.

PERSONS AGED 45 AND OVER WHO INTEND TO RETIRE FROM FULL-TIME WORK: SEPTEMBER 1984  
(<sup>'000</sup>)—(continued)

	Age intended to retire (years)						Persons(a)
	Males			Females			
	45-64	65 and over	Total(a)	45-59	60 and over	Total(a)	
<b>Housing arrangements at September 1984—</b>							
Owns own home . . . . .	137.0	245.4	525.2	32.9	64.4	160.1	685.3
Paying off home . . . . .	100.4	162.2	336.6	25.6	42.9	102.4	438.9
Renting from Housing Commission . . . . .	6.4	21.7	36.0	*	6.1	11.4	47.4
Renting from other . . . . .	24.7	66.2	127.5	5.0	19.1	42.6	170.1
Rent free . . . . .	4.1	15.1	27.1	*	6.2	11.1	38.1
Other . . . . .	*	3.6	7.0	*	3.1	6.3	13.3
<b>Expected housing arrangements at retirement—</b>							
Owns own home . . . . .	220.7	382.0	796.0	48.2	96.2	225.4	1,021.5
Paying off home . . . . .	26.0	38.7	80.1	10.7	14.1	35.0	115.2
Renting from Housing Commission . . . . .	5.6	17.8	29.3	*	5.8	10.9	40.2
Renting from other . . . . .	6.4	32.1	52.2	*	7.6	17.3	69.5
Rent free . . . . .	*	6.2	10.2	*	4.9	7.4	17.6
Other . . . . .	*	*	4.9	*	*	*	7.6
Did not know . . . . .	11.9	34.6	86.6	*	11.6	35.1	121.7

(a) Includes persons who did not know at what age they intended to retire. (b) May include some Government superannuation. (c) Includes persons who did not know what their main source of income would be. (d) Includes persons who had never worked.

## WAGE RATES, EARNINGS AND INCOME

### Industrial conciliation and arbitration

Legal minimum rates of pay for some 90 per cent of Australian wage and salary earners are prescribed in awards and determinations of Federal and State industrial tribunals or in collective agreements registered with them.

In June 1983 the Australian Conciliation and Arbitration Commission met to consider the formulation of new wage fixing principles in relation to the determination of national wage adjustments based on movements in the consumer price index.

On 23 September 1983, the Commission announced that it would try once again to operate a centralised system based on prima facie full indexation. It awarded an increase of 4.3 per cent based on the Consumer Price Index movements for the March and June 1983 quarters. The increase was operative from 6 October 1983 in all States except Queensland where it was operative from 10 October 1983. The increase was awarded on condition that any award be varied only if every union party to the award gave a public and unequivocal commitment to the new principles announced by the Commission. The majority of unions had given this commitment.

Under the new system, the Commission is to adjust its award wages and salaries every six months in relation to the last two quarterly movements of the CPI unless it is persuaded to the contrary.

The subsequent round of hearings in February-March 1984 resulted in the recommendation of a 4.1 per cent increase based on Consumer Price Index movements for the September and December 1983 quarters. The increase was operative from 6 April 1984 in all States except Queensland where it was operative from 9 April 1984. The ABS treatment of the method of financing medical services under the Medicare scheme introduced in February 1984 resulted in a negative movement in the Consumer Price Index for the March and June 1984 quarters. This led to agreement that no applications would be made to the Commission in relation to these quarters during October 1984.

The hearings in February-March 1985 resulted in the recommendation of a 2.6 per cent increase based on Consumer Price Index movements for the September and December 1984 quarters. The increase was operative from 6 April 1985 in all States except Queensland where it was operative from 15 April 1985. In Queensland a number of awards were varied by 1.6 per cent only, while under some others there was no increase.

Following the National Wage Case hearings in October 1985 the Commission awarded an increase of 3.8 per cent to operate from the beginning of the first pay period to commence on or after 4 November 1985. The Commission also decided to defer discounting of wages for the price effects of devaluation until the next National Wage Case hearings which are due in April 1986.

### Incidence of industrial awards

Set out below are details of the award coverage of employees obtained as a part of a sample survey conducted in May 1983. The survey was designed primarily to provide statistics of the distribution and composition of weekly earnings and hours of employees. The award coverage estimates shown are based on responses to a question which asked if employees had coverage under an award, determination, or registered collective agreement.

Employees covered by awards etc. are employees whose rates of pay and conditions of work are normally varied in accordance with variations in a specific Federal or State award, determination or collective agreement or a specific unregistered collective agreement (unregistered collective agreements dealing only with over-award pay are not included). Employees not covered by awards, etc. are those employees whose rates of pay and conditions of work are not varied in accordance with variations in a specific Federal or State award, etc.

INCIDENCE OF AWARDS: ALL EMPLOYEES BY INDUSTRY, MAY 1983  
(Per cent)

Industry	Males			Not covered by awards, etc.	Females			Not covered by awards, etc.
	Covered by awards, determinations and collective agreements				Covered by awards, determinations and collective agreements			
	Federal	State	Total (a)		Federal	State	Total (a)	
Mining . . . . .	45.6	32.3	80.3	19.7	*	*	*	*
Manufacturing . . . . .	50.9	32.6	84.2	15.8	42.8	44.6	87.7	12.3
Food, beverages and tobacco . . . . .	32.2	53.0	85.8	14.2	32.0	60.0	92.0	*
Textiles, clothing and footwear . . . . .	63.5	*	81.6	*	65.3	25.6	90.9	*
Paper, paper products, printing and publishing . . . . .	53.9	26.9	83.4	16.6	34.4	44.6	80.2	*
Chemical, petroleum and coal products . . . . .	37.3	29.5	69.2	30.8	*	57.6	77.9	*
Metal products, machinery and equipment . . . . .	61.8	24.7	86.8	13.2	45.2	44.3	89.5	*
Basic metal products . . . . .	36.2	50.8	88.3	*	*	*	*	*
Fabricated metal products; other machinery and equipment . . . . .	63.7	19.0	82.7	17.3	41.0	49.1	90.1	*
Transport equipment . . . . .	75.6	17.2	92.8	*	*	*	94.9	*
Other . . . . .	38.4	43.5	82.3	17.7	*	51.5	84.7	*
Electricity, gas and water . . . . .	42.1	56.7	99.4	*	*	*	99.3	*
Construction . . . . .	45.1	35.9	81.7	18.3	*	57.7	64.1	35.9
Wholesale trade . . . . .	28.4	37.2	66.3	33.7	15.2	66.5	81.9	18.1
Retail trade . . . . .	28.5	53.9	82.6	17.4	6.3	84.7	91.1	8.9
Transport and storage . . . . .	58.4	30.7	89.4	10.6	53.6	34.0	87.6	12.4
Communication . . . . .	99.9	..	99.9	*	99.9	..	99.9	*
Finance, property and business services . . . . .	40.8	27.9	69.1	30.9	39.5	47.3	87.1	12.9
Public administration and defence . . . . .	52.1	46.5	98.9	*	64.0	34.4	98.8	*
Community services . . . . .	17.4	68.8	87.1	12.9	7.3	83.4	92.1	7.9
Recreation, personal and other services . . . . .	31.6	45.5	77.8	22.2	30.2	57.9	88.2	11.8
<b>All industries . . . . .</b>	<b>42.0</b>	<b>40.9</b>	<b>83.6</b>	<b>16.4</b>	<b>23.7</b>	<b>65.4</b>	<b>89.7</b>	<b>10.3</b>

(a) Includes small numbers of employees covered by unregistered collective agreements.

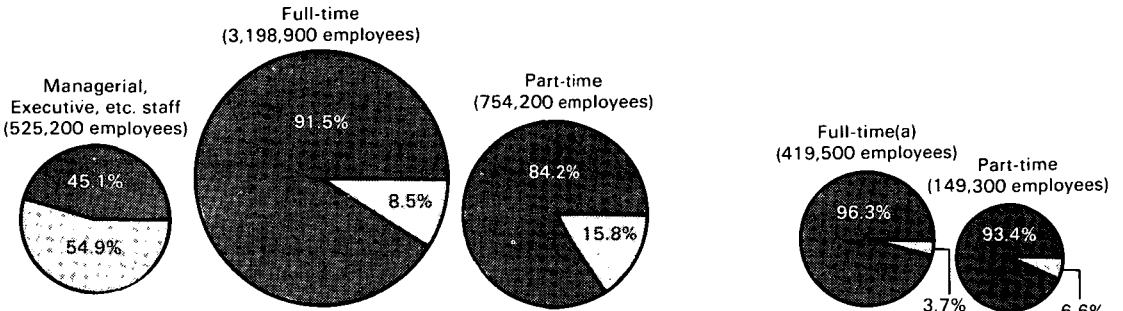


AWARD COVERAGE : EMPLOYEE CATEGORIES, AUSTRALIA, MAY 1983

ADULT

JUNIOR

Non-managerial



Covered by awards determinations and collective agreements

Not covered by awards, etc.

(a) Includes managerial, executive, etc. staff

PLATE 25



Printing Hall at the Note Printing Branch of the Reserve Bank of Australia.

*Australian Information Service photograph by John McKinnon*

**INCIDENCE OF AWARDS: ALL EMPLOYEES BY OCCUPATION GROUP, MAY 1983**  
(Per cent)

Occupation group	Males			Females				
	Covered by awards, determinations and collective agreements			Not covered by awards, etc.	Covered by awards, determinations and collective agreements			Not covered by awards, etc.
	Federal	State	Total(a)		Federal	State	Total(a)	
Professional, technical and related workers . . . . .	32.6	44.3	77.9	22.1	9.2	81.0	92.2	7.8
Nurses . . . . .	*	95.5	98.7	*	*	95.7	99.2	*
Teachers . . . . .	19.9	70.2	92.2	7.8	7.9	83.8	96.2	*
Draftsmen and technicians . . . . .	55.3	31.1	87.0	13.0	*	70.6	88.7	*
Administrative, executive and managerial workers . . . . .	19.8	12.9	33.1	66.9	5.9	37.6	43.5	56.5
Clerical workers . . . . .	52.2	35.4	88.0	12.0	28.2	60.4	88.9	11.1
Sales workers . . . . .	16.6	61.8	78.6	21.4	5.1	87.7	92.9	7.1
Farmers, fishermen and related workers	*	68.9	85.6	*	*	*	*	*
Miners, quarry and related workers . .	50.1	29.6	84.9	*	*	*	*	*
Workers in transport and communications . . . . .	54.5	35.5	90.3	9.7	54.7	35.9	90.6	9.4
Tradespersons, production-process workers and labourers, n.e.c. . . . .	52.9	38.6	92.1	7.9	59.7	35.2	95.3	4.7
Textile, clothing, footwear and leather goods makers and related workers	65.5	*	96.5	*	75.0	21.4	96.4	3.6
Machine toolmakers, metal machinists, mechanics, plumbers and related metal workers . . . . .	62.3	28.5	91.1	8.9	*	*	*	*
Electricians and related electrical and electronics workers . . . . .	63.0	32.9	96.3	*	*	*	*	*
Metalmaking and related workers(b)	67.0	29.4	96.9	*	90.5	*	97.9	*
Carpenters, cabinetmakers and related workers, building etc. tradespersons and construction workers(c) . . . . .	38.6	52.2	91.0	9.0	*	*	*	*
Packers, wrappers, labellers, storemen and freight handlers . . . . .	45.4	47.2	93.9	*	42.2	55.9	98.1	1.9
Labourers, apprentices, factory workers, n.e.c. . . . .	44.8	44.9	90.6	9.4	52.5	38.3	92.8	7.2
Service, sport and recreation workers	23.2	66.2	90.0	10.0	21.9	67.7	89.7	10.3
<b>All occupations . . . . .</b>	<b>42.0</b>	<b>40.9</b>	<b>83.6</b>	<b>16.4</b>	<b>23.7</b>	<b>65.4</b>	<b>89.7</b>	<b>10.3</b>

(a) Includes small number of employees covered by unregistered collective agreements. (b) Includes furnacemen, moulders and related metalmaking and treating workers, metal workers, metal and electrical production-process workers. (c) Includes carpenters, woodworking machinists, cabinetmakers and related workers, painters and decorators, bricklayers, plasterers and construction workers n.e.c.

### Award rates of pay indexes

The award rates of pay indexes are based on a representative sample of award designations and are designed to measure trends in rates payable under awards. The indexes are based on the occupation structure existing in May 1976. The base period chosen for the indexes is June 1976. Estimates of minimum award rates of pay for each component of the series are expressed as index numbers such that June 1976 = 100.0.

More detailed information including explanatory notes, definitions, etc., used in the indexes is contained in the monthly publication *Award Rates of Pay Indexes, Australia* (6312.0).

**FULL TIME ADULT WAGE AND SALARY EARNERS: INDEXES OF WEEKLY AWARD RATES OF PAY, JUNE 1980 TO JUNE 1985**

(Base: Weighted Average Minimum Award Rate, June 1976=100.0)  
(Index Numbers)

Industry	June					
	1980	1981	1982	1983	1984	1985
<b>MALES</b>						
<b>Manufacturing—</b>						
Food, beverages and tobacco . . . . .	135.8	155.6	173.4	183.7	210.1	206.2
Textiles, clothing and footwear . . . . .	134.6	154.7	176.6	187.0	203.6	208.7
Paper, paper products, printing and publishing . . . . .	136.9	157.4	179.9	183.4	199.4	204.7
Chemical, petroleum and coal products . . . . .	137.0	155.5	177.8	185.0	200.8	206.8
Metal products, machinery and equipment— . . . . .	141.5	159.3	188.7	191.5	208.6	213.9
Basic metal products . . . . .	139.7	157.6	180.2	182.7	199.0	204.2
Fabricated metal products, other machinery, and equipment . . . . .	143.9	162.1	194.4	196.5	214.2	219.6
Transport equipment . . . . .	139.3	156.2	185.7	189.3	206.6	211.8
Other . . . . .	138.6	157.3	179.8	187.5	204.3	209.9
<b>Non-manufacturing—</b>						
Mining . . . . .	138.1	154.6	173.8	181.2	197.4	202.4
Electricity, gas and water . . . . .	136.0	153.8	174.5	183.6	199.4	204.0
Construction . . . . .	137.9	156.7	179.8	189.2	206.6	211.6
Wholesale trade . . . . .	137.3	157.1	178.4	187.0	204.9	210.2
Retail trade . . . . .	137.2	156.9	176.5	185.5	203.2	208.4
Transport and storage . . . . .	137.8	155.1	177.4	184.9	202.2	207.8
Communication . . . . .	137.3	157.1	182.1	189.8	206.1	212.1
Finance, property and business services . . . . .	136.4	154.4	173.7	184.1	200.2	205.8
Public administration and defence (a) . . . . .	134.9	152.3	171.1	180.5	197.1	203.3
Community services . . . . .	135.1	155.0	175.5	184.1	201.4	206.6
Recreation, personal and other services . . . . .	136.4	154.3	170.7	182.6	199.3	204.6
<b>Total all industries (b) . . . . .</b>	<b>137.5</b>	<b>156.1</b>	<b>178.3</b>	<b>186.1</b>	<b>203.1</b>	<b>208.5</b>
<b>FEMALES</b>						
<b>Manufacturing—</b>						
Food, beverages and tobacco . . . . .	134.5	156.8	175.6	184.8	200.3	207.2
Textiles, clothing and footwear . . . . .	133.5	155.6	173.4	186.7	202.9	208.2
Paper, paper products, printing and publishing . . . . .	134.0	155.9	180.2	184.2	200.3	205.8
Chemical, petroleum and coal products . . . . .	132.3	153.4	170.6	179.9	195.3	201.8
Metal products, machinery and equipment— . . . . .	139.6	159.4	187.2	191.6	208.0	213.5
Basic metal products . . . . .	134.3	154.0	172.6	179.3	194.5	199.4
Fabricated metal products; other machinery, and equipment . . . . .	140.8	160.9	191.0	194.1	210.8	216.3
Transport equipment . . . . .	138.9	157.3	183.2	190.4	206.9	212.5
Other . . . . .	136.7	157.6	175.7	185.0	201.7	206.9
<b>Non-manufacturing—</b>						
Electricity, gas and water . . . . .	139.3	156.3	170.7	177.3	193.1	198.3
Construction . . . . .	136.4	156.6	171.9	180.5	201.1	206.4
Wholesale trade . . . . .	135.4	157.2	176.6	186.8	203.1	208.6
Retail trade . . . . .	133.2	155.5	172.6	182.0	200.5	205.9
Transport and storage . . . . .	135.2	154.5	172.4	182.0	198.1	204.7
Communication . . . . .	135.4	151.3	168.6	178.7	196.0	205.2
Finance, property and business services . . . . .	134.7	154.5	172.1	183.7	199.5	204.7
Public administration and defence (a) . . . . .	136.8	154.0	169.7	180.3	197.5	205.1
Community services . . . . .	135.3	155.7	177.6	186.0	203.5	209.0
Recreation, personal and other services . . . . .	138.5	156.7	170.6	180.0	196.0	201.8
<b>Total all industries (b) . . . . .</b>	<b>135.6</b>	<b>155.9</b>	<b>175.4</b>	<b>184.6</b>	<b>201.5</b>	<b>207.3</b>

(a) Excludes employees in the Defence Forces. (b) Excludes employees in the Defence Forces, Agriculture, Services to Agriculture and employees in private households employing staff.

**Average weekly earnings**

Statistics of average weekly earnings are produced quarterly, and are based on employment and earnings information obtained from a sample survey of employers. They relate to earnings of employees in respect of a single pay period ending on or before a specific date near the middle of the quarter. If, for a particular survey respondent, that pay period was affected unduly by an industrial dispute, plant breakdown, fire, etc, particulars for the previous normal pay period were obtained. Total earnings are gross earnings in a pay period, while ordinary time earnings refers to that part of total earnings attributable to award, standard or agreed hours of work.

Statistics of average weekly earnings are published in the quarterly publication *Average Weekly Earnings, States and Australia* (6302.0). The current series was introduced in November 1983, to complete the redevelopment of average weekly earnings series from that based principally on information from payroll tax returns. Average weekly earnings statistics were revised back to August 1981 with the introduction of the new series.

**ALL EMPLOYEES: AVERAGE WEEKLY EARNINGS 1981-1985**

Reference period	Male employees			Female employees			All employees		
	Full-time adult		Total	Full-time adult		Total	Full-time adult		Total
	Weekly ordinary time earnings	Weekly total earnings	Weekly total earnings	Weekly ordinary time earnings	Weekly total earnings	Weekly total earnings	Weekly ordinary time earnings	Weekly total earnings	Weekly total earnings
	—dollars—								
<b>1981</b>									
August . . . . .	283.20	306.80	283.30	230.60	236.70	190.30	267.00	284.80	247.20
November . . . . .	295.90	322.80	296.00	239.10	245.90	193.00	278.50	299.00	255.60
<b>1982</b>									
February . . . . .	309.80	336.40	312.40	246.10	253.20	202.60	289.40	310.10	269.20
May . . . . .	320.00	347.00	322.30	256.90	263.50	210.80	300.10	320.50	278.30
August . . . . .	334.20	357.90	329.90	265.90	271.70	217.00	312.40	330.30	285.00
November . . . . .	346.30	370.30	337.60	276.70	282.20	218.70	324.80	342.70	290.40
<b>1983</b>									
February . . . . .	350.50	370.30	341.00	280.90	286.20	225.30	328.60	343.70	295.40
May . . . . .	353.40	375.00	343.30	281.80	288.20	226.70	330.80	347.30	297.00
August . . . . .	357.10	379.80	349.70	283.80	289.90	228.30	333.50	350.80	300.80
November . . . . .	368.90	394.10	362.00	297.40	303.90	237.20	346.00	365.10	311.30
<b>1984</b>									
February . . . . .	376.20	400.70	370.60	304.10	311.00	246.50	353.10	371.90	321.30
May . . . . .	388.00	415.70	383.80	316.90	324.20	257.10	365.20	386.30	333.40
August . . . . .	392.40	419.20	386.20	319.00	326.70	256.20	369.00	389.80	334.30
November . . . . .	397.80	427.30	389.50	325.50	333.50	255.10	375.30	398.10	335.40
<b>1985</b>									
February . . . . .	399.60	429.00	392.70	328.40	335.90	260.10	377.50	400.10	340.10
May . . . . .	404.50	435.50	397.20	334.40	343.10	263.40	382.80	406.90	344.10
August . . . . .	409.80	441.60	403.10	338.70	346.80	265.00	387.90	412.50	347.80

In the November survey, additional information is collected relating to part-time and junior employees, managerial staff and hours of work as at a reference date in November.

**FULL-TIME NON-MANAGERIAL EMPLOYEES : AVERAGE EARNINGS AND HOURS PAID FOR,  
INDUSTRIES, NOVEMBER 1984**

Industry	Males			Females			Persons		
	Average weekly earnings \$	Average weekly hours paid for	Average hourly earnings \$	Average weekly earnings \$	Average weekly hours paid for	Average hourly earnings \$	Average weekly earnings \$	Average weekly hours paid for	Average hourly earnings \$
<b>ADULT EMPLOYEES</b>									
Mining . . . . .	607.40	41.9	14.48	383.20	39.8	9.63	591.30	41.8	14.15
Manufacturing									
Food, beverages and tobacco . . . . .	381.40	42.4	9.01	298.10	39.4	7.57	360.00	41.6	8.66
Textiles; clothing and footwear . . . . .	334.60	41.1	8.14	253.80	38.8	6.55	275.60	39.4	7.00
Paper, printing, etc. . . . .	430.20	40.3	10.68	313.40	37.8	8.29	396.60	39.6	10.03
Chemical, petroleum and coal products	429.50	41.5	10.36	317.20	38.4	8.26	395.80	40.5	9.76
Metal products, machinery and equipment									
Basic metal products . . . . .	427.40	41.0	10.42	334.00	38.1	8.77	419.80	40.8	10.29
Fabricated metal products; other machinery, etc. . . . .	375.10	41.5	9.03	307.00	40.1	7.65	359.70	41.2	8.73
Transport equipment . . . . .	391.10	41.4	9.44	293.10	40.2	7.29	378.30	41.3	9.17
<i>Total metal products, etc. . . . .</i>	<i>390.40</i>	<i>41.4</i>	<i>9.43</i>	<i>306.20</i>	<i>40.0</i>	<i>7.66</i>	<i>375.90</i>	<i>41.2</i>	<i>9.13</i>
Other manufacturing . . . . .	356.70	41.5	8.60	270.00	38.1	7.08	341.80	40.9	8.36
<i>Total manufacturing . . . . .</i>	<i>386.30</i>	<i>41.5</i>	<i>9.31</i>	<i>289.40</i>	<i>39.0</i>	<i>7.41</i>	<i>362.10</i>	<i>40.9</i>	<i>8.86</i>
Electricity, gas and water . . . . .	447.00	39.8	11.24	345.30	36.9	9.37	439.00	39.5	11.10
Construction . . . . .	425.10	40.6	10.47	326.70	37.9	8.63	418.20	40.4	10.35
Wholesale trade . . . . .	358.90	40.2	8.92	301.40	38.3	7.87	342.50	39.7	8.63
Retail trade . . . . .	315.90	42.2	7.49	273.10	39.5	6.92	300.00	41.2	7.29
Transport and storage; communication	423.30	40.9	10.36	355.30	39.4	9.02	411.60	40.6	10.14
Finance, business services . . . . .	386.20	39.3	9.83	310.90	37.9	8.21	348.90	38.6	9.04
Public administration, community services, etc. . . . .	424.70	38.1	11.14	362.20	37.4	9.67	392.40	37.8	10.39
Other industries . . . . .	345.20	40.1	8.61	293.00	39.4	7.44	323.70	39.8	8.14
<b>Total all industries . . . . .</b>	<b>405.50</b>	<b>40.3</b>	<b>10.05</b>	<b>329.20</b>	<b>38.2</b>	<b>8.62</b>	<b>380.00</b>	<b>39.6</b>	<b>9.59</b>
<b>JUNIOR EMPLOYEES</b>									
Mining . . . . .	350.40	38.7	9.05	217.90	37.6	5.80	303.40	38.3	7.92
Manufacturing									
Food, beverages and tobacco . . . . .	205.40	40.3	5.10	181.50	38.9	4.67	198.40	39.9	4.97
Textiles; clothing and footwear . . . . .	174.50	39.4	4.43	166.70	38.6	4.32	168.90	38.8	4.35
Paper, printing, etc. . . . .	199.50	38.1	5.23	193.90	37.6	5.16	197.40	37.9	5.20
Chemical, petroleum and coal products	223.50	40.7	5.49	194.00	38.0	5.10	213.00	39.8	5.36
Metal products, machinery and equipment									
Basic metal products . . . . .	258.40	37.5	6.90	224.10	38.2	5.86	255.80	37.5	6.82
Fabricated metal products; other machinery, etc. . . . .	194.30	39.2	4.96	193.90	38.5	5.04	194.20	39.1	4.97
Transport equipment . . . . .	219.60	39.3	5.58	198.80	38.7	5.14	217.80	39.3	5.54
<i>Total metal products, etc. . . . .</i>	<i>211.70</i>	<i>38.9</i>	<i>5.44</i>	<i>197.20</i>	<i>38.5</i>	<i>5.12</i>	<i>209.70</i>	<i>38.9</i>	<i>5.39</i>
Other manufacturing . . . . .	198.10	39.9	4.96	197.40	39.4	5.01	198.00	39.8	4.97
<i>Total manufacturing . . . . .</i>	<i>205.50</i>	<i>39.3</i>	<i>5.23</i>	<i>185.40</i>	<i>38.6</i>	<i>4.81</i>	<i>200.30</i>	<i>39.1</i>	<i>5.12</i>
Electricity, gas and water . . . . .	257.90	38.2	6.75	237.80	37.3	6.37	253.40	38.0	6.67
Construction . . . . .	228.90	38.7	5.92	198.80	37.9	5.25	226.50	38.6	5.87
Wholesale trade . . . . .	191.10	39.1	4.88	181.50	38.1	4.77	187.50	38.7	4.84
Retail trade . . . . .	182.40	40.5	4.50	175.90	39.0	4.51	179.20	39.8	4.51
Transport and storage; communication	223.90	38.6	5.79	210.10	38.4	5.48	219.50	38.6	5.69
Finance, business services . . . . .	212.90	38.4	5.54	203.80	38.2	5.34	206.50	38.3	5.40
Public administration, community services, etc. . . . .	226.20	41.6	5.43	215.00	38.7	5.55	219.40	39.9	5.50
Other industries . . . . .	166.90	40.6	4.11	181.50	40.0	4.54	175.90	40.3	4.37
<b>Total all industries . . . . .</b>	<b>207.80</b>	<b>39.6</b>	<b>5.24</b>	<b>195.00</b>	<b>38.7</b>	<b>5.05</b>	<b>202.00</b>	<b>39.2</b>	<b>5.15</b>

### Distribution and composition of earnings

Statistics on the distribution of employees according to weekly earnings and hours, and the composition of weekly earnings and hours for various categories of employees and principal occupations are produced from a survey of employers last conducted in May 1983.

Employers selected are requested to supply relevant details, for a sample of their employees randomly selected by the employers in accordance with instructions supplied by the ABS. Employers with fewer than 10 employees are required to complete a questionnaire for every employee.

The information presented in this subsection relates solely to the earnings data collected in the May 1983 survey. The table below sets out the composition of average weekly earnings of employees by State and Territory.

COMPOSITION OF AVERAGE WEEKLY EARNINGS: ALL EMPLOYEES, STATES AND TERRITORIES, MAY 1983 (\$)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>MALES</b>									
Overtime . . . . .	20.00	21.70	18.50	19.00	24.30	17.70	31.80	12.50	20.40
Ordinary time									
Award or agreed base rate of pay . . . . .	308.30	311.90	300.30	300.70	308.30	300.60	328.90	368.90	308.50
Payment by measured result (a) . . . . .	5.10	2.30	3.60	4.30	3.90	7.40	2.90	*	4.00
Over award and other pay . . . . .	9.60	11.60	8.60	7.40	10.70	6.00	9.40	*	9.70
<b>Total</b> . . . . .	<b>343.00</b>	<b>347.50</b>	<b>331.00</b>	<b>331.40</b>	<b>347.30</b>	<b>331.60</b>	<b>373.10</b>	<b>388.80</b>	<b>342.60</b>
<b>FEMALES</b>									
Overtime . . . . .	3.70	4.40	3.50	3.30	3.20	3.00	*	4.00	3.80
Ordinary time									
Award or agreed base rate of pay . . . . .	226.30	223.90	215.00	217.00	200.40	200.60	253.60	259.00	221.20
Payment by measured result (a) . . . . .	0.70	*	*	*	*	*	*	*	0.80
Over award and other pay . . . . .	4.20	3.80	2.70	2.40	3.00	*	1.60	*	3.50
<b>Total</b> . . . . .	<b>235.00</b>	<b>233.30</b>	<b>222.10</b>	<b>223.20</b>	<b>207.10</b>	<b>206.60</b>	<b>261.10</b>	<b>266.40</b>	<b>229.30</b>

(a) Earnings which vary according to measured performance (e.g. piecework, production and task bonuses or commission).

Average weekly ordinary time earnings can vary across occupation, and this is shown in the following chart. Note that males in the 'Miners' group had the highest average weekly earnings, while those in 'Sales' had the lowest in May 1983. For females the occupation group with the highest average weekly earnings was 'Professional' and the lowest was 'Tradespersons'.

AVERAGE WEEKLY ORDINARY TIME AND TOTAL EARNINGS OF ADULT EMPLOYEES IN MAJOR OCCUPATION GROUPS, MAY 1983

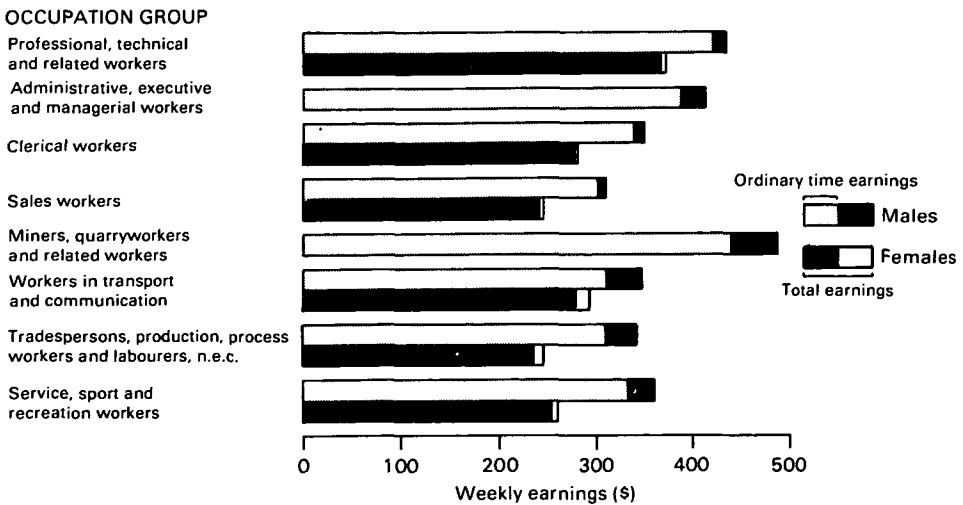


PLATE 26

## NON-WAGE BENEFITS

The previous section concentrated on monetary remuneration for employment. In this section, attention is given to a range of benefits other than wages, salaries and supplements that may arise from employment. Benefits covered are employer-provided concessions or allowances such as holiday costs, low interest finance, goods and services, housing, electricity, telephone, transport, medical, union dues, club fees, entertainment, shares, study leave, superannuation or children's education expenses. The survey was expanded in 1984 to cover three benefits not previously included—sick leave, annual leave and long-service leave.

Other than leave provisions, which were available to more than two-thirds of employees, superannuation was the most regularly received benefit. The incidence of this benefit was considerably higher for males than for females in every occupation group.

ALL EMPLOYEES: SELECTED BENEFITS RECEIVED, AUGUST 1984

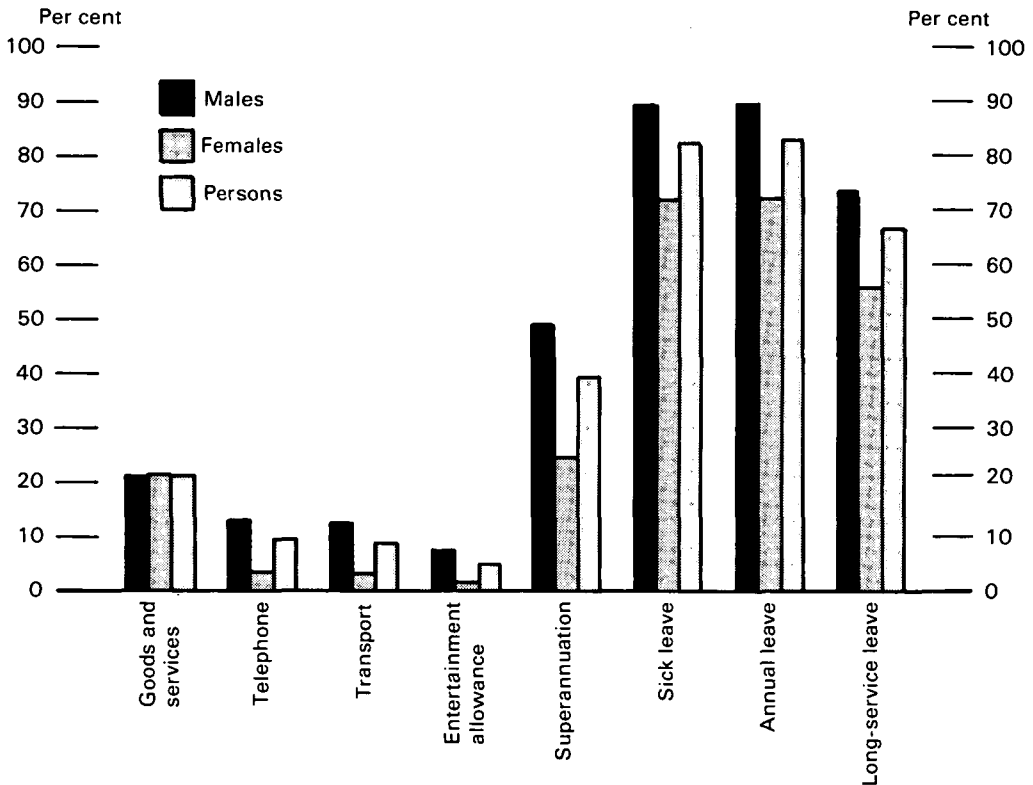


PLATE 27

The survey also showed that employees at the highest levels of earnings were more likely to receive non-wage benefits. The exceptions were goods and services and annual and sick leave. Children's education expenses were rarely provided. There was also an increased likelihood of receiving benefits as employees' hours of work increased.

## EMPLOYEES: TYPE OF BENEFIT RECEIVED AND WEEKLY EARNINGS IN MAIN JOB, AUGUST 1984

	<i>Weekly earnings in main job—dollars</i>								<i>Total</i>
	<i>Under 160</i>	<i>160 and under 200</i>	<i>200 and under 240</i>	<i>240 and under 280</i>	<i>280 and under 320</i>	<i>320 and under 400</i>	<i>400 and under 480</i>	<i>480 and over</i>	
<b>Total employees ('000)</b>	<b>920.4</b>	<b>356.2</b>	<b>533.7</b>	<b>734.1</b>	<b>714.7</b>	<b>922.9</b>	<b>497.6</b>	<b>678.4</b>	<b>5,358.2</b>
<b>PERCENTAGE OF EMPLOYEES RECEIVING BENEFIT</b>									
<i>Type of benefit</i>									
Holiday costs	1.1	1.8	3.2	3.2	3.9	5.2	5.2	7.4	3.9
Low-interest finance	0.5	*	1.6	2.1	2.7	3.6	4.2	6.4	2.8
Goods and services	21.5	24.0	21.5	23.7	22.2	21.6	18.3	18.3	21.4
Housing	3.6	2.8	4.0	2.8	3.0	3.4	4.9	8.8	4.1
Electricity	3.2	2.1	3.0	1.7	1.4	2.2	2.0	3.9	2.4
Telephone	5.8	4.3	6.1	4.4	6.3	9.2	14.9	23.4	9.3
Transport	4.2	3.5	5.3	5.6	7.7	11.1	13.0	18.6	8.7
Medical	1.9	2.4	2.6	2.2	3.2	3.9	4.5	8.0	3.6
Union dues	1.2	1.1	2.0	1.5	1.7	2.9	3.8	6.2	2.5
Club fees	0.9	*	0.7	0.6	1.1	1.9	2.9	5.7	1.8
Entertainment allowance	1.5	1.8	2.0	2.2	3.0	5.7	9.3	15.4	5.1
Shares	0.8	*	1.3	1.0	1.0	2.0	2.8	3.6	1.6
Study leave	1.0	1.3	0.9	1.0	1.7	2.4	3.2	3.0	1.8
Superannuation	6.5	20.0	25.3	34.7	44.8	52.0	62.4	71.7	39.5
Children's education expenses	*	*	*	*	*	*	*	1.0	0.3
Sick leave	39.3	77.1	85.6	91.3	93.6	95.0	94.7	94.3	82.5
Annual leave	39.3	78.6	86.5	91.6	93.6	95.2	94.8	94.7	82.8
Long-service leave	22.4	52.9	59.7	71.3	78.1	82.1	85.8	87.7	66.7

## EMPLOYEES: TYPE OF BENEFIT RECEIVED AND HOURS WORKED IN MAIN JOB, AUGUST 1984

	<i>Hours worked in main job</i>						<i>Total</i>
	<i>Less than 20</i>	<i>20-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40</i>	<i>41 and over</i>	
<b>Total employees ('000)</b>	<b>824.3</b>	<b>375.5</b>	<b>440.6</b>	<b>1,111.4</b>	<b>1,404.5</b>	<b>1,202.0</b>	<b>5,358.2</b>
<b>PERCENTAGE OF EMPLOYEES RECEIVING BENEFIT</b>							
<i>Type of benefit</i>							
Holiday costs	2.9	3.0	4.4	3.3	3.8	5.3	3.9
Low-interest finance	1.3	2.0	3.8	2.9	2.5	3.7	2.8
Goods and services	19.8	20.1	22.0	16.2	21.7	27.1	21.4
Housing	2.2	2.5	3.4	2.2	4.1	8.0	4.1
Electricity	1.9	1.8	1.8	1.1	2.1	4.9	2.4
Telephone	5.3	6.3	6.4	4.8	8.1	19.5	9.3
Transport	4.0	4.7	4.9	4.2	8.3	19.4	8.7
Medical	2.1	2.8	4.0	3.6	3.2	5.2	3.6
Union dues	1.1	1.6	1.9	1.4	2.0	5.6	2.5
Club fees	0.7	*	1.2	1.0	1.2	4.6	1.8
Entertainment allowance	1.9	1.7	2.3	2.2	4.5	12.6	5.1
Shares	0.9	0.8	0.9	0.8	1.6	3.6	1.6
Study leave	1.4	1.6	1.4	2.6	1.5	2.0	1.8
Superannuation	19.4	26.0	42.9	52.6	37.4	46.7	39.5
Children's education expenses	*	*	*	*	*	0.9	0.3
Sick leave	43.0	61.9	85.3	94.5	93.7	90.7	82.5
Annual leave	43.1	61.9	85.4	94.8	94.2	91.3	82.8
Long-service leave	35.9	47.8	73.1	81.4	72.7	70.9	66.7



## HOURS OF WORK AND WORK PATTERNS

It is widely recognised that statistics of hours of work and patterns of work are essential for the study of economic activity, productivity, working conditions, living standards and the quality of life of working people. In this section a range of data has been brought together on work patterns and hours of work.

### EMPLOYED PERSONS: AGGREGATE AND AVERAGE WEEKLY HOURS WORKED<sup>(a)</sup> MAY 1983 TO MAY 1985

	<i>Females</i>			<i>Total</i>	<i>Persons</i>
	<i>Males</i>	<i>Married</i>	<i>Not married</i>		
MAY 1983					
Aggregate weekly hours worked (million) . . . . .	150.5	37.8	29.6	67.4	217.9
By full-time workers . . . . .	146.5	28.4	26.8	55.2	201.7
By part-time workers . . . . .	3.9	9.4	2.8	12.2	16.2
Average weekly hours worked . . . . .	38.3	26.9	31.5	28.7	34.7
By full-time workers . . . . .	39.8	37.0	36.5	36.8	38.9
By part-time workers . . . . .	16.1	14.7	13.6	14.5	14.8
By wage and salary earners . . . . .	36.7	26.5	31.4	28.7	33.6
By other than wage and salary earners <sup>(b)</sup> . . . . .	46.1	28.5	34.5	29.3	40.9
Average weekly hours worked by persons who worked one hour or more in the survey week . . . . .	41.1	29.2	33.5	31.0	37.3
By full-time workers . . . . .	42.7	40.3	38.7	39.5	41.8
By part-time workers . . . . .	17.5	16.0	14.5	15.6	16.1
MAY 1984					
Aggregate weekly hours worked (million) . . . . .	160.1	39.3	31.4	70.7	230.8
By full-time workers . . . . .	156.2	29.2	28.0	57.2	213.4
By part-time workers . . . . .	3.9	10.1	3.4	13.5	17.4
Average weekly hours worked . . . . .	39.6	27.2	31.2	28.9	35.6
By full-time workers . . . . .	41.2	37.6	36.6	37.1	40.0
By part-time workers . . . . .	15.7	15.2	14.0	14.9	15.0
By wage and salary earners . . . . .	37.8	26.7	31.1	28.7	34.2
By other than wage and salary earners <sup>(b)</sup> . . . . .	48.4	29.6	32.4	30.0	42.9
Average weekly hours worked by persons who worked one hour or more in the survey week . . . . .	42.3	29.7	33.2	31.2	38.1
By full-time workers . . . . .	44.0	40.8	39.0	39.9	42.8
By part-time workers . . . . .	16.8	16.6	14.9	16.1	16.3
MAY 1985					
Aggregate weekly hours worked (million) . . . . .	162.2	41.6	32.9	74.5	236.8
By full-time workers . . . . .	158.3	30.6	29.5	60.2	218.5
By part-time workers . . . . .	3.9	11.0	3.4	14.4	18.3
Average weekly hours worked . . . . .	39.7	27.6	31.7	29.3	35.7
By full-time workers . . . . .	41.4	38.1	37.1	37.6	40.3
By part-time workers . . . . .	15.2	15.6	13.9	15.2	15.2
By wage and salary earners . . . . .	38.0	27.2	31.5	29.1	34.4
By other than wage and salary earners <sup>(b)</sup> . . . . .	47.9	29.3	37.6	30.4	42.5
Average weekly hours worked by persons who worked one hour or more in the survey week . . . . .	42.2	29.5	33.5	31.1	37.9
By full-time workers . . . . .	43.9	40.9	39.1	40.0	42.7
By part-time workers . . . . .	16.4	16.6	14.8	16.1	16.2

(a) The figures refer to actual hours worked not hours paid for. (b) Comprises employers, self-employed persons and unpaid family helpers who worked 15 hours or more.

The table above sets out aggregate and average hours worked by employed persons who are either working full-time or part-time. The following table provides information on average hours worked by employed persons by the industry of their employment.

## EMPLOYED PERSONS: AVERAGE WEEKLY HOURS WORKED(a) BY INDUSTRY, MAY 1985

Industry	Males	Females		Persons
		Married	Total	
Agriculture, forestry, fishing and hunting . . . . .	51.3	27.5	28.6	45.0
Agriculture and services to agriculture . . . . .	52.1	27.9	28.9	45.5
Forestry and logging, fishing and hunting . . . . .	40.7	16.3	19.7	37.4
Mining . . . . .	38.8	31.0	33.3	38.4
Manufacturing . . . . .	39.0	31.0	32.4	37.3
Food, beverages and tobacco . . . . .	38.2	31.6	32.0	36.4
Metal products . . . . .	38.6	28.3	30.7	37.5
Other manufacturing . . . . .	39.4	31.2	32.7	37.5
Electricity, gas and water . . . . .	34.7	28.2	30.6	34.4
Construction . . . . .	39.3	18.1	20.3	36.8
Wholesale and retail trade . . . . .	41.1	29.4	28.9	35.7
Wholesale trade . . . . .	40.8	28.3	31.8	38.1
Retail trade . . . . .	41.3	29.7	28.1	34.7
Transport and storage . . . . .	39.4	25.7	30.2	38.0
Communication . . . . .	34.7	26.4	30.0	33.4
Finance, property and business services . . . . .	39.6	26.8	30.1	35.2
Public administration and defence . . . . .	35.2	28.6	31.5	33.8
Community services . . . . .	36.8	26.3	28.7	31.7
Recreation, personal and other services . . . . .	39.5	27.3	28.1	33.1
<b>All industries</b> . . . . .	<b>39.7</b>	<b>27.6</b>	<b>29.3</b>	<b>35.7</b>

(a) The estimates refer to actual hours worked, not hours paid for.

Statistics on overtime are produced from a survey conducted each quarter. This survey has recently undergone redevelopment in association with the development of the other employer surveys. The redeveloped survey was introduced in the December quarter 1983 and, for that quarter, statistics were produced on both the old basis and the new to provide a link between them.

## OVERTIME BY INDUSTRY, 1980 TO 1985

Industry	May 1980(a)	May 1981(a)	May 1982(a)	May 1983(a)	May 1984(b)	May 1985(b)
AVERAGE WEEKLY OVERTIME HOURS PER EMPLOYEE WORKING OVERTIME						
Mining . . . . .	8.2	9.6	9.6	8.4	8.7	10.5
Manufacturing . . . . .	7.6	7.7	7.6	7.5	7.8	7.7
Food, beverages and tobacco . . . . .	7.0	7.5	6.8	6.7	6.0	6.3
Textiles, clothing and footwear . . . . .	7.0	6.8	9.8	10.5	8.6	8.9
Paper, printing, etc. . . . .	7.2	6.0	5.6	6.5	6.2	6.0
Chemical, petroleum and coal products . . . . .	7.2	8.1	7.7	7.4	10.3	9.0
Basic metal products . . . . .	8.0	8.3	7.6	7.3	10.7	9.2
Fabricated metal products, other machinery, etc. . . . .	7.6	8.2	7.5	7.7	7.7	7.6
Transport equipment . . . . .	7.1	8.2	8.1	7.3	7.8	9.3
Other manufacturing . . . . .	8.4	7.8	8.1	7.5	7.8	7.1
Electricity, gas and water . . . . .	7.4	7.7	8.0	7.9	7.2	7.3
Construction . . . . .	7.5	7.5	8.0	8.2	6.9	7.3
Wholesale trade . . . . .	7.6	7.0	6.2	6.3	6.0	6.4
Retail trade . . . . .	4.5	4.3	4.4	3.9	3.7	3.5
Transport and storage, communication . . . . .	7.0	7.2	7.5	7.4	7.3	7.6
Public administration, community services . . . . .	6.7	6.8	7.1	6.8	5.6	5.7
Other . . . . .	4.6	4.4	5.3	5.2	6.2	6.1
<b>All industries.</b> . . . .	<b>7.0</b>	<b>7.1</b>	<b>7.1</b>	<b>6.9</b>	<b>6.7</b>	<b>6.8</b>

See footnotes at end of table.

## OVERTIME BY INDUSTRY, 1980 TO 1985—continued

Industry	May	May	May	May	May	May
	1980 (a)	1981 (a)	1982 (a)	1983 (a)	1984 (b)	1985 (b)
PERCENTAGE OF EMPLOYEES IN THE SURVEY WORKING OVERTIME						
Mining . . . . .	45.9	59.6	53.3	45.3	46.7	42.6
Manufacturing . . . . .	29.2	29.7	28.9	23.7	28.0	31.5
Food, beverages and tobacco . . . . .	31.8	38.9	36.4	30.8	34.2	37.3
Textiles, clothing and footwear . . . . .	18.5	18.3	19.9	21.2	24.6	24.7
Paper, printing, etc. . . . .	27.6	27.5	26.3	20.7	17.9	19.7
Chemical, petroleum and coal products . . . . .	28.2	24.2	22.7	23.4	22.2	22.0
Basic metal products . . . . .	43.6	43.0	36.1	29.3	38.0	37.7
Fabricated metal products, other machinery, etc. . . . .	29.2	29.2	29.0	22.9	26.8	31.1
Transport equipment . . . . .	20.1	25.0	28.0	14.3	30.7	37.6
Other manufacturing . . . . .	31.5	27.3	26.8	24.2	27.8	33.7
Electricity, gas and water . . . . .	26.0	23.3	26.0	22.0	23.0	24.6
Construction . . . . .	28.3	29.6	29.7	23.4	17.4	21.1
Wholesale trade . . . . .	16.8	19.8	17.1	17.0	15.5	16.7
Retail trade . . . . .	16.2	17.5	19.0	17.4	15.5	19.3
Transport and storage, communication . . . . .	35.1	35.0	35.3	27.6	27.0	31.9
Public administration, community services . . . . .	7.3	7.9	7.8	7.7	8.3	7.1
Other . . . . .	8.9	13.2	10.8	11.8	7.4	9.9
All industries . . . . .	19.7	21.1	20.4	17.4	16.5	18.2

(a) Result from payroll tax based survey. (b) Result of sample survey of employers.

## INDUSTRIAL DISPUTES

This section presents statistics of industrial disputes involving stoppages of work of ten man-days or more at the establishments where such stoppages occurred. Industrial disputes data is obtained from employers (private and government), trade unions, and from reports of government authorities.

An industrial dispute is a withdrawal from work by a group of employees or a refusal by an employer (or a number of employers) to permit some or all employees to work, each withdrawal or refusal being made to enforce a demand, resist a demand, or to express a grievance. Workers involved includes workers directly and indirectly involved in disputes, with the indirectly involved being only those thrown out of work at establishments where stoppages have occurred but who are not party to the disputes. Working days lost refer to man-days lost by workers directly or indirectly involved in disputes.

The annual figures contained in these tables relate to disputes *in progress*, whilst figures in the table on page 170 relate only to disputes which *ended* in the reference year.

## INDUSTRIAL DISPUTES: AUSTRALIA, 1979 TO 1984

Year	Number of disputes		Workers involved ('000)		Working days lost ('000)
	Commenced in year	Total (a)	Newly involved (b)	Total (a)	
1979 . . . . .	2,040	2,042	1,861.6	1,862.9	3,964.4
1980 . . . . .	2,420	2,429	1,165.2	1,172.8	3,320.2
1981 . . . . .	2,887	2,915	1,229.1	1,251.8	4,192.2
1982 . . . . .	2,045	2,060	691.3	722.9	2,158.0
1983 . . . . .	1,779	1,787	453.0	470.5	1,641.4
1984 . . . . .	1,958	1,965	553.1	562.3	1,307.4

(a) Refers to all disputes in progress during the year. (b) Comprises workers involved in disputes which commenced during the year and additional workers involved in disputes which continued from the previous year.

**INDUSTRIAL DISPUTES: WORKING DAYS LOST BY INDUSTRY, 1979 TO 1984**  
(*'000*)

Year	Manufacturing							All industries
	Mining		Metal products, machinery and equipment		Construction	Transport and storage; Communication	Other industries (a)	
	Coal	Other		Other				
1979 . . . . .	232.6	283.6	929.7	749.0	359.7	550.1	859.7	3,964.4
1980 . . . . .	710.7	197.7	615.9	728.4	217.9	215.9	633.7	3,320.2
1981 . . . . .	318.3	307.4	1,221.6	654.1	441.9	465.5	783.3	4,192.2
1982 . . . . .	525.8	157.1	241.8	333.0	231.1	296.2	373.1	2,158.0
1983 . . . . .	122.8	194.7	157.6	120.7	337.2	213.6	494.8	1,641.4
1984 . . . . .	131.1	193.2	144.8	249.3	116.3	150.6	322.1	1,307.4

(a) Includes: agriculture, etc.; electricity, etc.; wholesale and retail trade; finance, etc.; public administration, etc.; community services; recreation and personal services.

**INDUSTRIAL DISPUTES: WORKING DAYS LOST BY STATE, 1979 TO 1984**  
(*'000*)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (a)
1979 . . . . .	1,369.9	1,486.1	467.9	186.5	348.1	59.8	3,964.4
1980 . . . . .	1,208.6	1,115.4	618.7	59.4	191.0	91.5	3,320.2
1981 . . . . .	1,918.6	1,235.5	465.8	158.8	244.0	64.3	4,192.2
1982 . . . . .	961.6	368.0	509.8	66.6	162.4	61.5	2,158.0
1983 . . . . .	801.2	257.7	135.0	87.7	270.6	67.8	1,641.4
1984 . . . . .	660.6	187.5	236.5	25.5	119.2	50.5	1,307.4

(a) Includes the Northern Territory and the Australian Capital Territory.

The following table shows the number of working days lost per 1,000 employees in the years 1979 to 1984. The figures have been calculated by using estimates of employees from the Labour Force Survey.

**INDUSTRIAL DISPUTES: WORKING DAYS LOST PER THOUSAND EMPLOYEES BY INDUSTRY, 1979 TO 1984**

Year	Manufacturing							All industries (a)
	Mining		Metal products, machinery and equipment		Construction	Transport and storage; Communication	Other industries (a)	
	Coal	Other		Other				
1979 . . . . .	8,220	5,752	1,886	1,112	1,100	1,348	269	787
1980 . . . . .	23,379	4,036	1,194	1,080	674	535	202	649
1981 . . . . .	10,302	5,238	2,287	986	1,405	1,116	238	798
1982 . . . . .	14,645	2,686	471	505	768	688	84	392
1983 . . . . .	3,223	3,375	353	186	1,269	485	42	249
1984 . . . . .	3,543	3,286	327	387	427	346	94	246

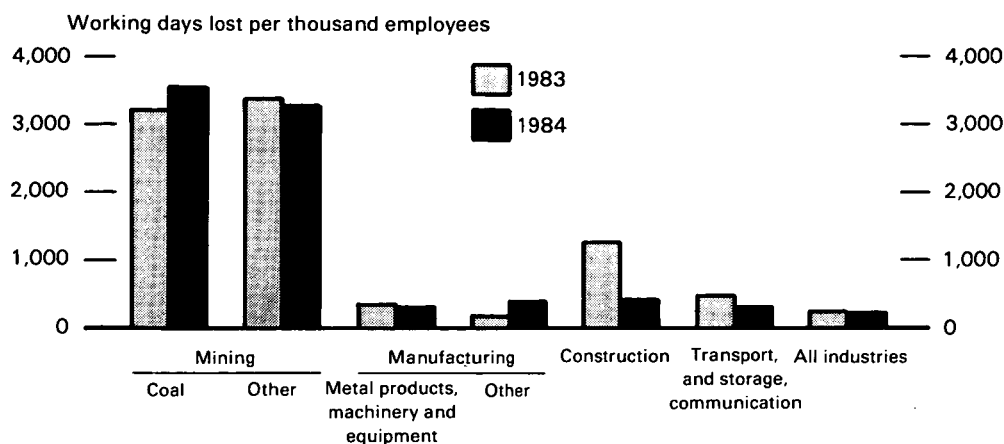
(a) Excludes agriculture, etc. and private households employing staff.

**INDUSTRIAL DISPUTES: WORKING DAYS LOST PER THOUSAND EMPLOYEES (a) BY STATE, 1979 TO 1984**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (b)
1979 . . . . .	742	1,083	679	402	838	439	787
1980 . . . . .	657	792	863	132	446	668	649
1981 . . . . .	1,024	863	620	320	548	461	798
1982 . . . . .	476	258	660	101	348	431	392
1983 . . . . .	287	163	176	115	577	478	249
1984 . . . . .	355	131	301	56	251	352	246

(a) Excludes agriculture, etc. and private households employing staff. (b) Includes the Northern Territory and the Australian Capital Territory.

**INDUSTRIAL DISPUTES: WORKING DAYS LOST PER THOUSAND EMPLOYEES  
BY INDUSTRY, 1983 AND 1984**



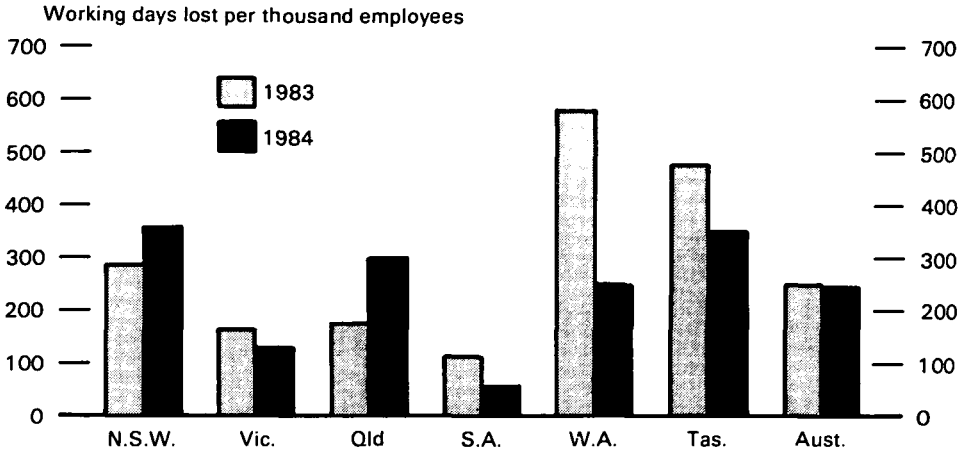
**PLATE 28**

**INDUSTRIAL DISPUTES: DURATION, CAUSES AND METHODS OF SETTLEMENT,  
WORKING DAYS LOST, 1982 TO 1984 (a)**  
(<sup>'000</sup>)

	1982	1983	1984
<b>DURATION</b>			
Up to 1 day . . . . .	187.1	153.7	187.7
Over 1 to 2 days . . . . .	290.8	138.8	194.6
Over 2 to 3 days . . . . .	323.0	228.3	213.2
Over 3 to less than 5 days . . . . .	515.1	303.4	202.8
5 to less than 10 days . . . . .	629.0	242.5	183.5
10 to less than 20 days . . . . .	247.0	652.2	271.6
40 days and over . . . . .			
<b>Total</b> . . . . .	<b>2,219.0</b>	<b>1,691.9</b>	<b>1,253.5</b>
<b>CAUSES</b>			
Wages . . . . .	1,081.4	207.2	308.4
Hours of work . . . . .	455.2	84.6	73.4
Managerial policy . . . . .	369.1	735.1	407.0
Physical working conditions . . . . .	155.6	532.2	204.1
Trade unionism . . . . .	76.7	55.3	109.5
Other(b) . . . . .	81.0	77.6	151.0
<b>Total</b> . . . . .	<b>2,219.0</b>	<b>1,691.9</b>	<b>1,253.5</b>
<b>METHODS OF SETTLEMENT (c)</b>			
Negotiation . . . . .	412.7	351.0	314.6
State legislation—			
Under State conciliation, etc., legislation . . . . .	129.2	284.7	260.2
Intervention, etc., of State Government officials . . . . .			
Federal and joint Federal State legislation (d) . . . . .	691.7	417.2	80.9
Resumption without negotiation . . . . .	976.9	629.6	585.9
Other methods(e). . . . .	8.6	9.4	12.0
<b>Total</b> . . . . .	<b>2,219.0</b>	<b>1,691.9</b>	<b>1,253.5</b>

(a) Refers to disputes which ended in the year. (b) Includes 'Leave, pensions, compensation provisions, etc'. (c) Method directly responsible for ending the stoppage of work. (d) Includes Industrial Tribunals under (i) Conciliation and Arbitration Act, (ii) Coal Industry Acts, (iii) Stevedoring Act, (iv) Other Acts, and intervention, etc. of Federal government officials. (e) Includes 'Mediation', 'Filling the places of workers on strike or locked out' and 'Closing down the establishment permanently'.

**INDUSTRIAL DISPUTES: WORKING DAYS LOST PER THOUSAND EMPLOYEES  
BY STATE, 1983 AND 1984**



**PLATE 29**

**TRADE UNIONS**

For the purpose of the following statistics a trade union is defined as an organisation, consisting predominantly of employees, whose principal activities include the negotiation of rates of pay and conditions of employment for its members. Returns showing membership by States and Territories at 31 December each year are obtained for all trade unions and employee organisations.

**TRADE UNIONS: NUMBER, MEMBERSHIP AND PROPORTION OF TOTAL EMPLOYEES, 1979-1984**

<i>End of December</i>	<i>Number of separate unions (a)</i>	<i>Number of members ('000)</i>			<i>Proportion of total employees (per cent)</i>		
		<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
1979 . . . . .	328	1,971.4	902.2	2,873.6	61	47	56
1980 . . . . .	325	2,009.5	946.3	2,955.9	61	47	56
1981 . . . . .	324	2,029.4	964.7	2,994.1	60	48	56
1982 . . . . .	322	2,024.4	988.0	3,012.4	62	49	57
1983 . . . . .	319	2,007.2	978.0	2,985.2	61	46	55
1984 . . . . .	329	2,041.2	987.3	3,028.5	61	45	55

(a) Without inter-State duplication.

In the table above the approximate percentages of wages and salary earners in employment who were members of trade unions are shown. The proportions of total employees shown have been calculated by using estimates of employees from the labour force survey. The percentages shown should be regarded as giving only a broad indication of the extent of union membership among employed wage and salary earners because the degree of unemployment of reported union members will affect the percentages for a particular year and comparison over time. Such comparisons may also be affected by duplication in the count of members due to persons holding membership in more than one union, and by union perceptions and practices in regard to membership (e.g. membership may be restricted to 'financial' members only) which can change over time.

## TRADE UNIONS: CLASSIFICATION ACCORDING TO NUMBER OF MEMBERS, 1984

Number of members	Separate unions		Members	
	Number	Proportion of total (per cent)	Number ('000)	Proportion of total (per cent)
Under 100	41	12.4	2.0	0.1
100 and under 250	45	13.7	6.9	0.2
250 " " 500	24	7.3	8.4	0.3
500 " " 1,000	52	15.8	37.2	1.2
1,000 " " 2,000	41	12.4	56.7	1.9
2,000 " " 5,000	40	12.2	127.3	4.2
5,000 " " 10,000	22	6.7	156.1	5.2
10,000 " " 20,000	20	6.1	289.5	9.4
20,000 " " 30,000	13	4.0	307.3	10.1
30,000 " " 40,000	6	1.8	207.1	6.8
40,000 " " 50,000	11	3.4	495.7	16.4
50,000 " " 80,000	4	1.2	244.5	8.0
80,000 and over.	10	3.0	1,089.5	36.0
<b>Total.</b>	<b>329</b>	<b>100.0</b>	<b>3,028.5</b>	<b>100.0</b>

In addition, a special household supplementary survey was conducted from March to May 1982 to provide information on the characteristics of trade union members such as their age, industry, and occupation. Summary details were shown in Year Book No. 69.

## INDUSTRIAL ACCIDENTS

The only regular statistics concerning occupational health and safety collected by the ABS are the annual statistics of industrial accidents and disease which are published by most State Offices. In recent years some improvements have been made to these statistics through the progressive adoption of standardised classifications and data items. However, in producing these statistics, the ABS has to rely upon administrative by-product data generated under the differing provisions of worker's compensation legislation in each State. Because of these legislative differences and coverage and reporting deficiencies of the by-product source data, and because the Commonwealth employee sector remains uncollected, the statistics do not provide an adequate picture of the nation's occupational safety and health record. Thus, users of the statistics are limited to some State-specific data on a variety of items such as type and duration of disability, industry of employment, age, sex, agency and type of accident, and nature and bodily location of injury.

The collection of statistics of occupational health and safety may undergo significant change in the future, following the Federal Government's establishment of a National Occupational Health and Safety Commission. It is intended that this body will have responsibilities for the facilitation and co-ordination of action in collaboration with State Governments, aimed at improved working conditions and reducing the incidence of death, injury and illness in the workplace. To assist in this process, a National Occupational Health and Safety Office (NOHSO) and a National Institute of Occupational Health and Safety (NIOHS) are to be created. The objectives of NIOHS include plans to develop and implement improved systems for the collection, recording, evaluation and dissemination of statistics and other information.

## EMPLOYMENT AND TRAINING PROGRAMS

In order to ensure that its programs were appropriate to the current needs of the labour market the Commonwealth Government established, in 1983, the Committee of Inquiry in Labour Market Programs. As a result of that Committee's recommendations the Government has restructured and rationalised its labour force programs. The resulting mix of programs is designed to promote work experience and training. The principal aims of the labour force programs are to maintain a supply of trained persons to meet the needs of industry and to assist disadvantaged groups in the labour market. Labour force programs operating in 1986 are detailed as follows.

## Vocational Training for Young People

### Australian Traineeship System (ATS)

Up to 100,000 young people leave school each year with no substantial vocational preparation. To redress this situation the Government has recently established the Australian Traineeship System. The long term objective of the ATS is to establish a new system of quality vocational training as an alternative transitional path from school to work for those young people who do not go on to higher education, technical or trade training.

Traineeships are of at least 12 months duration and consist of a structured combination of on-the-job work experience and training, including formal off-the-job training of at least 13 weeks.

In 1985-86 10,000 traineeships will be offered to school leavers, with preference given to those who have not completed Year 12. It is the Government's aim that this target rise progressively to 75,000 traineeships per annum by 1988-89.

In order to establish the ATS as a quality training system, the Federal Government provides:

- on-the-job training fees of \$1,000 per trainee paid to employers; \$2,000 per trainee will be paid to employers who take on those especially disadvantaged in the labour market;
- off-the-job training fees of \$1,700 per trainee paid to TAFE (\$2,000 per trainee to all other off-the-job providers) for the equivalent of at least 13 weeks training for a 12 month traineeship; and
- living away from home, moving and travel allowances to trainees, where appropriate.

The trainee is paid a wage negotiated by unions and employers, of between \$90 per week and the rate of pay, at current junior hourly rates, for the time spent on the job.

The Commonwealth and State Governments will share the responsibility for the approval of traineeship proposals from employers and industries. The States will be responsible for administering training arrangements.

### Transition Allowance

The *Transition Allowance*, equal to the level of unemployment benefit plus \$6.00 per week, is available to eligible unemployed young persons to enable them to attend full-time vocationally oriented training courses conducted mainly in Technical and Further Education (TAFE) Colleges. Most Transition Allowance-eligible courses are funded under the Participation and Equity Program (PEP). For further details refer to Chapter 12, Education.

### Experimental Training Projects

This program funds innovative short-term training arrangements to meet identified training and employment-related needs of unemployed young people.

Preference is given to those who are most disadvantaged. Financial assistance is available to appropriate training institutions, employer and industry associations and established community groups to develop and pilot training arrangements.

Trainees are eligible for an equivalent of Transition Allowance and related benefits.

### Pre-Apprenticeship Allowance

The *Pre-Apprenticeship Allowance* of \$20 per week is available to students attending approved trade based pre-employment courses at TAFE institutions when assistance under other Commonwealth education assistance schemes is not available at a higher rate.

## Adult Training and Retraining

A new comprehensive adult training program was introduced on 1 January 1986 and includes the following elements:

- assistance to adults who have been unemployed for six months or longer, although this eligibility criterion is waived in the case of disabled people or other seriously disadvantaged people; these people are assisted to attend existing courses at training educational institutions or specially designed and purchased courses tailored to identified group needs;
- the Labour Adjustment Training Arrangements which have been retained as a separate entity; (see below)
- building on the experience with the Skills in Demand program, an enhanced and continuing capacity to respond to national skill shortages by assisting the establishment of appropriate courses at the State and local levels; the main focus is to satisfy skill shortage needs although disadvantaged unemployed people are assisted with training allowances as appropriate.



This program has subsumed the formal training elements of the General Training Assistance program and the Training for the Disabled program.

### **Industry Training Services**

In addition to specific schemes directed at the training of individuals, the Government also provides aid to assist industry to develop and improve its own training programs.

### **Labour Adjustment Training Arrangements**

Redundant workers in designated instances of large scale retrenchments are eligible for flexible packages of special training assistance. The arrangements are developed in consultation with the retrenching firm(s), relevant unions and education authorities and are implemented in educational institutions and available industry training facilities. Assistance is provided through the payment of allowances to eligible trainees, negotiating special courses not locally available and meeting the costs of development and provision of such courses.

## **Trade Training Program**

### **Commonwealth Rebate for Apprentice Full-time Training (CRAFT)**

Assistance under CRAFT takes four forms. *Technical Education Rebates* are payable to employers for releasing their apprentices to attend, or study by correspondence, the technical education component of an approved basic trade course. From 1 January 1985, these rebates range from \$22.80 to \$44.60 per day.

Rebates are also payable to employers who release their apprentices to attend approved full-time *Off-The-Job* training courses at their own or other industry training centres in the first year of apprenticeship and range from \$22.80 to \$32.60 per day.

*Pre-vocational Graduate Employment Rebates* of \$750 are payable to employers who engage an apprentice, on or after 1 January 1985, who has completed an approved trade based pre-employment course which results in exemption from at least one stage of technical education and a reduction of at least 6 months in the normal period of apprenticeship. Eligible apprentices engaged prior to 1 January 1985 can attract for their employer a higher rate of technical education rebate of between \$31.60 and \$45.60 per day.

A *Living Away From Home Allowance* is also provided at the rate of, from 1 January 1985, \$35.80 for first year apprentices and \$15.25 for apprentices in their second year of apprenticeship.

### **Special Apprentice Training Schemes**

Four types of support are available for certain categories of apprentices.

Under the *Group Apprentice Support Program* joint Commonwealth/State financial support is provided to employer and industry associations for costs associated with the management and administration of new or expanded group apprenticeship schemes.

The *Special Trade Training Program* is directed at developing new approaches to complement traditional apprentice training. It includes a range of schemes through which innovations can be tested and/or introduced. The major components of this program are special training schemes for mature age apprentices and the provision of Commonwealth assistance to State and Territory governments to provide additional trade based pre-employment course places, with particular emphasis on expanding places for young women.

The *Special Assistance Program* is aimed at reducing the incidence of apprentice retrenchments and wastage. Wage subsidies may be payable to existing employers of indentured apprentices to retain the apprentice in employment and training or to new employers who engage and indenture out of trade apprentices who were retrenched due to the economic circumstances of their previous employer. In addition, apprentices who are out of trade may be eligible for a training allowance to enable completion of the basic trade course and/or to undertake an approved course of off-the-job training.

Under the *Group One Year Apprentice Scheme* training is provided to first year apprentices utilising spare training capacity within Commonwealth and State government establishments. Apprentices are indentured to private employers, but are trained in government establishments for the first year before returning to their employer for the remainder of their apprenticeship.

## **Community Based Programs and Assistance to Special Groups**

### **Community-based Programs**

Assistance to unemployed young persons and those groups especially disadvantaged in the labour market is provided through labour market support programs which encourage the community to respond to their needs.

### **Community Youth Support Scheme (CYSS)**

The objective of CYSS is to encourage communities to assist local unemployed young people to develop their capacity for obtaining and retaining employment and also to become more self-reliant during periods of unemployment.

### **Community-based Labour Market Program (CLMP)**

This Program has been introduced from 1 January 1986. It incorporates the existing Community Youth Special Projects (CYSP), the Volunteer Youth Program (VYP) and the Work Preparation Program (WPP). It also extends funding to local community groups to assist especially disadvantaged people in the labour market and provide for experimentation in the area of information technology training.

### **Other Assistance for the Disabled**

A disabled job-seeker is one who, because of a mental or physical impairment which results in a loss or reduction of functional capacity, has difficulty in finding or keeping employment.

A subsidy of \$104.30 per week is available to employers who indenture a disabled person. The subsidy is paid for the duration of the apprenticeship.

### **Training for Aboriginals (TAP)**

A wide range of training assistance in various occupations and industries is available under TAP. Aboriginals who are either registered with an office of the CES or who lack basic skills for employment or wish to upgrade their skills, as well as Aboriginal school-leavers, may be considered for assistance under this program.

Seven general kinds of assistance are provided:

- public sector training;
- on-the-job (private sector) training;
- formal training;
- special training projects;
- private sector (negotiated fee) training;
- work experience;
- other training assistance.

## **Employment Incentives**

### **Integrated Wage Subsidy Program**

From 1 January 1986, the former range of wage subsidy programs, including the Special Youth Employment and Training Program, the Adult Wage Subsidy Scheme, the Special Needs Program and the on-the-job component of the General Training Assistance Program and the Training for the Disabled Program, has been replaced by a new Integrated Wage Subsidy Program. The new program provides more equitable, effective and targeted assistance to the longer term unemployed including the especially disadvantaged across all age groups and is a simpler program for employers, job seekers and program administrators.

The new program provides subsidy periods of six months with the eligibility period of six months unemployment being waived in the case of disabled and special needs clients. Subsidy rates are based on a rational structure related in a systematic way to the degree of disadvantage and length of unemployment of the participants. Subsidies are now available on a pro-rata basis for part-time work generally in excess of 20 hours with the emphasis on disabled and special needs clients. The Commonwealth Work Experience Program (CWEP) continues.

The subsidy rates for private sector employees are set out in the table below.

**DEPARTMENT OF EMPLOYMENT AND INDUSTRIAL RELATIONS  
SUBSIDY RATES FOR PRIVATE SECTOR EMPLOYEES**

	15-17 years	18-20 years	21-44 years	45 years plus
	—\$ per week—			
Unemployed 6-12 months . . . . .	50	75	100	125
Unemployed over 12 months, or disabled, or special needs . . . . .	75	110	150	180

### Job Creation

#### Community Employment Program (CEP)

This program was established by the *Community Employment Act 1983* as a three year program, ending on 30 June 1986, and is designed to create additional employment opportunities for unemployed persons through the funding of labour intensive projects of social and economic benefit to the community. The CEP is directed at those unemployed persons who are particularly disadvantaged in the labour market and who are consequently least likely to benefit from improved economic activity. These include the long-term unemployed, Aborigines, migrants with English language difficulties and people with disabilities. It is an objective of the Program that women receive an equal share of the jobs created, except for the Jobs on Local Roads (JOLOR) component, which has a 25 per cent target for women's participation.

Eligible projects are those which provide additional employment to that which otherwise would have occurred; are labour intensive; provide services of public and community value and provide worthwhile work experience and/or training for participants.

The Commonwealth contribution is on the basis of meeting 70 per cent to 80 per cent of overall costs. Sponsors are required to contribute the remainder with State/Territory governments being expected to contribute a minimum of 30 per cent of total project costs while local government and community groups contribute 20 per cent; this requirement can be waived for community organisations in extenuating circumstances.

#### New Enterprise Incentive Scheme (NEIS)

The objective of the pilot *New Enterprise Incentive Scheme (NEIS)* is to create employment opportunities for those unemployed persons with the capacity to establish a small business. NEIS provides training, and income support broadly equivalent to unemployment benefit for up to 52 weeks. The Scheme operates in conjunction with State Government schemes which offer establishment capital and access to business counselling. Six hundred places are available on the pilot scheme.

### Mobility Assistance Placement and Information Services

A number of programs are funded to support the Government's labour force and training policies and to offset the effects of certain inefficiencies in the labour market.

The two main types of program are mobility assistance programs and information programs. Mobility assistance includes the *Relocation Assistance Scheme (RAS)* which assists the relocation of unemployed people or people who have received notification of impending redundancy and who are unable to obtain within a reasonable time continuing employment in the area in which they live, and the *Fares Assistance Scheme (FAS)* which assists unemployed people to attend job interviews with prospective employers.

The information programs include the provision of *Occupation Information and a National Promotional Campaign* to ensure a widespread knowledge of the assistance provided under the Government's program.

## DEPARTMENT OF EMPLOYMENT AND INDUSTRIAL RELATIONS

LABOUR MARKET PROGRAMS AND SERVICES EXPENDITURE 1980-81 TO 1985-86  
(\$'000)

Type of program	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86 (est)
<b>Training Programs—</b>						
<b>Vocational Training for Young People—</b>						
Australian Traineeship System . . . . .	—	—	—	—	—	15,700
Transition Allowance . . . . .	4,703	8,423	11,365	14,564	16,121	15,571
Experimental Training Projects . . . . .	—	—	948	1,034	1,807	2,329
Pre-Apprenticeship Allowance . . . . .	1,587	1,146	1,941	3,274	3,466	5,100
<b>Adult Training and Retraining—</b>						
Labour Adjustment Training (LATA) . . . . .	—	(a)	(a)	11,223	9,670	10,700
Skills in Demand (SID) . . . . .	478	2,482(b)	3,606(b)	2,068	3,092	4,509
<b>General Training Assistance—</b>						
Formal . . . . .	2,726	2,751	3,306	3,746	4,473	3,200(c)
On-the-job . . . . .	8,006	5,522	2,692	1,842	848	600(c)
<b>Former Regular Service Members'</b>						
Vocational Training Scheme . . . . .	287	196	74	31	11	15
Adult Training and Retraining . . . . .	—	—	—	—	—	5,591(d)
Industry Training Services . . . . .	3,000	4,500	5,222	6,943	8,649	12,000
<b>Trade Training—</b>						
CRAFT . . . . .	64,451	78,749	84,938	86,603	99,362	98,000
Special Apprenticeship Training . . . . .	3,600	3,360	10,456	20,049	17,336	19,600
<b>Community Based and Special Groups—</b>						
<b>Community-based Programs—</b>						
Community Youth Support Scheme . . . . .	13,800	14,200	17,880	21,348	26,056	32,000
Community Youth Special Projects . . . . .	206	586	1,499	2,794	3,342	5,280
Volunteer Youth Program . . . . .	157	151	178	392	529	1,020
Work Preparation Program . . . . .	404	1,064	1,437	1,506	2,594	3,280
Locally based community projects . . . . .	—	—	—	—	—	2,300
Information Technology Centres . . . . .	—	—	—	—	—	400
<b>Other Assistance for the Disabled—</b>						
Formal . . . . .	461	615	807	1,120	476	340(c)
Apprentices . . . . .	—	—	—	—	1,063	2,280
Aboriginals . . . . .	13,928	19,044	24,610	41,040	53,356	58,500
<b>Job Creation and Employment Assistance—</b>						
<b>Employment Incentives—</b>						
Work Experience (SYETP) . . . . .	41,255	53,702	63,625	120,192	97,673	68,000
Adult Wage Subsidy Scheme . . . . .	—	—	375	23,200	35,134	27,300
Special Needs Clients . . . . .	731	1,007	751	1,938	2,333	2,700
Disabled On-the-Job . . . . .	1,854	4,792	4,068	7,161	9,234	9,100
Integrated Wage Subsidy Program . . . . .	—	—	—	—	—	34,900(e)
<b>Job Creation—</b>						
Wage Pause Program (f) . . . . .	—	—	98,900	101,100	—	—
Community Employment Program . . . . .	—	—	—	285,422	405,543	290,000
Assistance to the Steel Regions . . . . .	—	—	—	—	3,198	555
<b>Mobility Assistance—</b>						
Relocation Assistance Scheme . . . . .	1,265	1,599	2,160	3,497	3,016	3,500
Fares Assistance Scheme . . . . .	303	264	362	416	451	600
<b>Placement and Information Services—</b>						
Occupational Information . . . . .	1,620	1,211	1,627	2,402	2,883	2,600
<b>Employment Services—</b>						
National Promotional Campaign . . . . .	840	124	962	2,477(g)	2,200	(h)
Employment Strategies . . . . .	428	290	512	(i)	(i)	(h)
<b>Other—</b>						
Industrial Democracy Grants . . . . .	—	—	—	17	(j)	—
<b>Total Expenditure . . . . .</b>	<b>166,090</b>	<b>205,778</b>	<b>344,301</b>	<b>767,399</b>	<b>813,916</b>	<b>737,570</b>

(a) Expenditure included under SID. (b) Includes LATA expenditure. (c) Expenditure relates to approvals to 31 December 1985. This program will then be replaced by the Adult Training and Retraining. (d) Expenditure relates to approvals in the period 1 January 1986 to 30 June 1986. This Program replaces General Training Assistance, Skills in Demand and the formal elements of Other Assistance for the Disabled. (e) Expenditure relates to approvals to 31 December 1985. This program will then be replaced by the Integrated Wage Subsidy Program. (f) Funds were appropriated to the Department of Finance. (g) Includes estimate for expenditure on Employment Strategies. (h) This item is included in the Department's Administrative expenditure. (i) Included under National Promotional Campaign since 1983-84. (j) Expenditure relates to approvals in the period 1 January 1986 to 30 June 1986. This scheme replaces the Assistance for Work Experience, Adult Wage Subsidy Scheme, Special Needs Job Seekers and Disabled On-the-Job.

## DEPARTMENT OF EMPLOYMENT AND INDUSTRIAL RELATIONS

LABOUR MARKET PROGRAMS AND SERVICES APPROVALS<sup>(a)</sup> 1981-82 TO 1985-86

Type of program	1981-82	1982-83	1983-84	1984-85	1985-86 (est.)
<b>Training Programs—</b>					
Vocational Training for Young People—					
Australian Traineeships System . . . . .	—	—	—	—	10,000
Transition Allowance . . . . .	11,456	14,069	15,204	15,246	12,220
Experimental Training Projects . . . . .	—	150	369	630	600
Pre-apprenticeship Allowance . . . . .	1,596	3,785	6,073	5,828	6,716
Adult Training and Retraining—					
Labour Adjustment Training . . . . .	—	(b)	3,701	2,765	2,400
Skills in Demand . . . . .	1,213	1,615(c)	426	553	1,050
General Training Assistance					
Formal . . . . .	1,086	1,656	1,521	1,766	1,000(d)
On-the-job . . . . .	7,320	3,526	1,832	1,237	600(d)
Adult Training Program . . . . .	—	—	—	—	2,200(e)
Trade Training Program					
CRAFT . . . . .	99,000	100,577	81,986	80,300	83,620
Special Apprentice Training . . . . .	3,040	8,278	8,340	5,475	5,176
Community Based and Special Groups					
Community-based Programs					
Community Youth Special Projects(f) . . . . .	(n.a.)	(n.a.)	956	1,202	1,540
Work Preparation Program (Disabled) . . . . .	447	376	460	482	500
Other Assistance for the Disabled—					
Formal . . . . .	94	111	93	136	70(d)
Apprentices . . . . .	(n.a.)	(n.a.)	124	211	230
Aborigines . . . . .	4,628	5,697	9,257	10,180	11,533
Job Creation and Employment Assistance—					
Employment Incentives—					
Work Experience—					
Standard SYETP					
Private . . . . .	37,525	45,129	50,718	39,893	18,741(g)
Commonwealth . . . . .	3,589	4,233	4,621	4,598	3,600(g)
State . . . . .	—	567	789	—	—
Extended SYETP . . . . .	10,582	16,337	31,454	24,383	11,048(g)
Adult Wage Subsidy Scheme—					
Standard . . . . .	—	1,360	13,074	11,943	5,527(g)
Extended . . . . .	—	282	2,279	2,395	1,235(g)
Special Needs Jobseekers . . . . .	915	1,012	2,097	2,190	1,360(g)
Disabled On-the-job . . . . .	3,235	2,719	4,140	4,643	2,404(g)
Integrated Wage Subsidy Program . . . . .	—	—	—	—	41,185(h)
Job Creation—					
Wage Pause Program(i) . . . . .	—	3,532	17,129	—	—
Community Employment Program(k) . . . . .	—	—	29,393	45,600	45,000
Mobility Assistance—					
Relocation Assistance Scheme . . . . .	1,513	1,985	2,790	2,290	2,700
<b>Total All Programs</b> . . . . .	<b>187,239</b>	<b>216,996</b>	<b>288,826</b>	<b>263,946</b>	<b>272,255</b>

(a) An "approval" is defined as a person who was approved for, and commenced under a specific program, for which financial assistance was available. An approval is registered each time an individual commences in a different component of a program, or in different programs, i.e. the total number of approvals can be greater than the number of individuals commencing in any one year. In some programs, the number of training or course places to be funded or job placements/commencements (CEP) are used instead of approvals. These have been included as approvals, given the explanation above. It should be noted that the total number assisted under any program in a financial year is greater than the number of approvals, owing to carry-over of trainees into each financial year. (b) Approvals included under SID. (c) Figure includes LATA approvals for 1982-83. (d) Approvals relate to the period 1 July 1985 to 31 December 1985. This Program will then be replaced by the Adult Training Program. (e) Approvals relate to the period 1 January 1986 to 30 June 1986. This Program replaces General Training Assistance, Skills in Demand and the formal elements of Special Training for Disabled. (f) The CYSP trainee allowance is payable only to participants in projects which provide full time courses. Participants in other CYSP projects retain eligibility for the unemployment benefit and so are not included in this table. (g) Approvals relate to the period 1 July 1985 to 31 December 1985. This Program will be replaced by the Integrated Wage Subsidy Program. (h) Approvals relate to the period 1 January 1986 to 30 June 1986. This Scheme replaces the Assistance for Work Experience, Adult Wage Subsidy Scheme, Special Needs Jobseekers and Disabled On-the-Job. (i) Funds for this program were appropriated to the Department of Finance, but the program was administered by the State and Territory Governments in consultation with the Department of Employment and Industrial Relations. Figures refer to placements recorded by the CES. It should be noted that not all placement activity occurred through the CES. (k) Estimate only for 1983-84. Estimate for 1984-85 refers to initial job commencements only and does not include labour turnover. It should be noted that commencements and expenditure patterns do not necessarily coincide for CEP. This results from lags between project approval and commencement, and from the pattern of payments to projects, e.g. \$283.2 million of 1984-85 expenditure will be on projects approved/recommended in 1983-84.

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## CHAPTER 9

### SOCIAL SECURITY AND WELFARE

The Commonwealth Government, the State Governments and voluntary welfare organisations all provide social welfare services. This chapter concentrates on the benefits and services provided by the Commonwealth Government, principally those of the Departments of Social Security, Community Services and Veterans' Affairs but mention is also made of the services provided by the Departments of Aboriginal Affairs and Immigration and Ethnic Affairs. Also included is a section relating to Income Distribution surveys which provides a summary of the distribution of money income across the Australian population.

Details of services administered by the Commonwealth Department of Health are given in Chapter 10, Health. Details of pension and superannuation schemes for government and semi-government employees, mine workers, parliamentarians and employees of private business are included in Chapter 21, Private Finance.

#### Commonwealth Government expenditure on social security services

This section deals with various government payments for the relief of the aged, indigent, infirm, widowed, orphaned and unemployed; assistance to families; etc. On 1 July 1947, with the passage of the *Social Services Consolidation Act 1947*, all Acts providing social security benefits were amalgamated. The Act is at present styled the *Social Security Act 1985*.

The main social security benefits provided by the Commonwealth Government under the *Social Security Act 1985*, as at June 1985, and the date on which each came into operation, are shown below:

Age pension . . . . .	1 July 1909
Invalid pension . . . . .	14 October 1910
Family allowance . . . . .	1 July 1941
Widow's pension . . . . .	30 June 1942
Funeral benefit . . . . .	1 July 1943
Unemployment benefit . . . . .	1 July 1945
Sickness benefit . . . . .	1 July 1945
Special benefit . . . . .	1 July 1945
Allowances associated with the Commonwealth Rehabilitation Service (including Rehabilitation allowance) . . . . .	10 December 1948
Sheltered employment allowance . . . . .	30 June 1967
Wife's pension (superseded wife's allowance) . . . . .	5 October 1972
Supporting parent's benefit (female) . . . . .	3 July 1973
Double orphans' pension . . . . .	26 September 1973
Handicapped child's allowance . . . . .	30 December 1974
Supporting parent's benefit (male) . . . . .	10 November 1977
Rehabilitation allowance . . . . .	1 March 1983
Mobility allowance . . . . .	1 April 1983
Family income supplement . . . . .	1 May 1983
Spouse carer's pension . . . . .	1 December 1983

Details of the respective rates of pensions and benefits and details of associated allowances available to certain recipients are shown, along with more specific eligibility criteria, in the Annual Report of the Department of Social Security.

#### Age and invalid pensions and associated payments

Age pensions are payable to men and women who have reached the ages of 65 and 60 respectively. They are generally subject to residence qualifications and an income test, and from 21 March 1985 an assets test.

Invalid pensions are payable to persons between sixteen years of age and age pension age who are permanently incapacitated for work to the extent of at least 85 per cent, or

permanently blind. Invalid pension is paid subject to an income test, and from 21 March 1985 an assets test, except for pensions paid to the permanently blind.

A wife's pension is payable to the wife of a pensioner not entitled, in her own right, to an age, invalid or repatriation service pension. There is no residence qualification, but an income or assets test applies.

A spouse carer's pension is payable to the husband of a pensioner who is providing constant care and attention at home for his wife, if he is not eligible for a pension in his own right.

Additional pension is payable for each dependent child under 16 years and dependent full-time students aged 16 to 24 years, subject to the income test. Widowed or other unmarried age or invalid pensioners with a dependent child may, in addition, receive a guardian's allowance. Supplementary assistance, subject to a special income test, is available to pensioners if they pay rent or pay for board or lodging. Remote area allowance is payable to pensioners living in income tax Zone A, except for those aged 70 years or more receiving the special rate of age pension.

## AGE PENSIONERS: 30 JUNE

Age	1983	1984	1985
60-64 years . . . . .	161,921	168,545	167,250
65-69 years . . . . .	326,582	315,704	303,105
70-74 years . . . . .	376,115	357,274	345,205
75 years and over . . . . .	526,220	516,606	516,222
<b>Total . . . . .</b>	<b>1,390,838</b>	<b>1,358,129</b>	<b>1,331,782</b>
Number of wife/spouse carer pensioners (a)	26,380	24,561	23,558
Total payments during years (b) \$'000 . . . . .	4,867,554	5,313,659	5,638,926

## INVALID PENSIONERS: 30 JUNE

Age	1983	1984	1985
16-19 years . . . . .	6,805	7,070	7,409
20-39 years . . . . .	49,102	52,799	56,176
40-59 years . . . . .	117,844	130,202	141,725
60 and over . . . . .	46,538	50,503	53,852
<b>Total . . . . .</b>	<b>220,289</b>	<b>240,574</b>	<b>259,162</b>
Number of wife/spouse carer pensioners (a)	57,011	67,273	75,855
Total payments during year (b) \$'000 . . . . .	1,068,350	1,252,650	1,469,772

(a) Spouse carer pensioners are included from June 1984. (b) Includes allowances, supplementary assistance and wives pensions where applicable.

**Sheltered employment allowance and associated payments**

Sheltered employment allowance is payable to disabled people who are employed in approved sheltered workshops and are otherwise qualified to receive an invalid pension or would become so qualified if they ceased to be provided with sheltered employment. The allowance is subject to the same income and assets test as applies to invalid pension and is paid at the same rate. It is payable in the form of a supplement to the sheltered employee's wages.

At 30 June 1985, 200 workshops were paying the allowance to 9,655 disabled employees. Expenditure during the year 1984-85 was \$51,353,000.

**Widows' pensions and associated payments**

There are three categories of widow pensioners:

**Class 'A'**. A widow who has the custody, care and control of one or more qualifying children under the age of sixteen years or dependent full time student aged 16-24;

**Class 'B'**. A widow who, because she has no qualifying children or students in her custody, care and control, is not eligible for a Class 'A' widow's pension but is either at least 50 years of age or, after having reached the age of 45, has ceased to receive a Class 'A' pension by reason of ceasing to have the custody, care and control of a qualifying child or student; and



**Class 'C'.** A widow not eligible for Class 'A' or Class 'B' widow's pension, who is under 50 years of age and is in necessitous circumstances within 26 weeks of her husband's death.

A widow's pension is income and assets tested and is not payable to a woman receiving an age or invalid pension, a supporting parent's benefit, an unemployment, sickness or special benefit, a sheltered employment allowance, or a war widow's pension.

In addition to the basic pension, a mother's/guardian's allowance and additional pension for each dependent child are payable in the case of a widow with children. Rent assistance is also available to widows if they pay rent or pay for board or lodging. Remote area allowance is payable to widows living in income tax Zone A.

#### WIDOW PENSIONERS, BY AGE: 30 JUNE

Age	1983	1984	1985
<b>Class A widow pensioners aged—</b>			
Under 20 years . . . . .	96	47	49
20-29 years . . . . .	11,883	10,127	8,942
30-39 years . . . . .	37,082	35,616	34,434
40-49 years . . . . .	24,807	25,496	25,609
50-59 years . . . . .	10,211	9,719	9,064
60 years and over . . . . .	182	171	180
<b>Class B widow pensioners aged—</b>			
45-49 years . . . . .	3,282	3,608	3,887
50-54 years . . . . .	19,609	20,023	20,110
55-59 years . . . . .	38,898	39,404	39,035
60 years and over . . . . .	18,437	18,720	18,509
Class C widow pensioners . . . . .	119	114	96
<b>Total</b>	<b>164,606</b>	<b>163,045</b>	<b>159,915</b>
<b>Total payments during year (a) \$'000</b>	<b>758,086</b>	<b>829,537</b>	<b>889,380</b>

(a) Includes payment to benevolent homes for maintenance of pensioners. It also includes supplementary assistance and allowances.

#### Supporting parent's benefit

Supporting parent's benefit was introduced in November 1977 to extend to supporting fathers the same benefit as had previously been available to supporting mothers through supporting mother's benefit. The benefit is available to sole parents who have custody, care and control of a child under 16 years or a dependent full-time student aged 16 to 24 years. It is subject to an income and assets test.

#### SUPPORTING PARENTS, BY AGE AND TYPE: 30 JUNE

Age and type of beneficiary	1983	1984	1985
<b>Age</b>			
Under 20 years . . . . .	9,787	9,647	9,971
20-29 years . . . . .	66,501	70,794	76,332
30-39 years . . . . .	45,623	51,786	57,968
40-49 years . . . . .	14,907	17,468	19,584
50-59 years . . . . .	3,255	3,706	3,926
60 years and over . . . . .	153	188	236
<b>Type of beneficiary</b>			
<b>Females—</b>			
Unmarried mothers . . . . .	41,654	42,994	44,104
Separated wives . . . . .	73,801	83,305	94,931
Separated de facto wives . . . . .	16,903	18,381	19,246
<b>Males—</b>			
Widowers . . . . .	1,072	1,128	1,140
Divorcees . . . . .	1,468	1,591	1,502
Separated husbands . . . . .	3,757	4,438	5,555
Separated de facto husbands . . . . .	1,431	1,609	1,349
Other . . . . .	142	143	190
Number of beneficiaries . . . . .	140,228	153,589	168,017
Total payments during year (a) \$'000 . . . . .	727,734	889,595	1,066,197

(a) Includes rent assistance and allowances.

**Fringe benefits**

The Commonwealth Government makes several non-cash 'fringe benefits' available to pensioners and recipients of supporting parent's and sickness benefits who are entitled to a Pensioner Health Benefits (PHB) card or a Health Benefits (HB) card and their dependants. The issue of these cards is subject to a special income test. These benefits include:

- a range of free pharmaceuticals;
- a one-third reduction in telephone rental (subject to the income of co-residents);
- reduced fares for Commonwealth Government railway and shipping services;
- postal redirection concessions; and
- free hearing aids services.

State Governments, local government authorities and private organisations also provide certain fringe benefits. The most valuable of these are reductions in local government rates and in public transport charges.

There were 1,738,075 pensioners with PHB (Pensioner Health Benefits) cards entitling them to Commonwealth pensioner fringe benefits at 30 June 1985.

**Unemployment, and sickness and special benefits and associated payments**

Unemployment and sickness benefits are paid to men over sixteen and under sixty-five years of age, and to women over sixteen and under sixty years of age, who are unemployed or temporarily incapacitated for work. They must have been living in Australia during the preceding twelve months or be likely to remain permanently in Australia. Both benefits are subject to an income test. A person cannot receive both benefits simultaneously, nor can a person receive either benefit at the same time as an invalid, widow's, service pension or supporting parent's benefit.

For unemployment benefit purposes, people must establish that they are unemployed, that their unemployment is not due to industrial action by themselves or by members of a union of which they are a member, that they are capable and willing to undertake suitable work, and that they have taken reasonable steps to obtain such work. Registration for employment with the Commonwealth Employment Service is necessary. For sickness benefit purposes, people must establish that they are temporarily incapacitated for work because of sickness or injury and that they have thereby suffered a loss of salary, wages or other income.

All unemployment and sickness beneficiaries with dependent children are eligible for an additional benefit for each dependent child. In addition, sole parents are eligible for mother's/guardian's allowance. After the benefit has been paid for six consecutive weeks a sickness beneficiary who is paying rent or is paying for board or lodging may be entitled to a supplementary allowance.

In the case of sickness benefit, any amount of compensation, damages or similar payment, or war disability pension, paid in respect of the same incapacity as that for which the benefit is claimed, is deducted from the benefit if it is paid in respect of the same period.

A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not eligible for any pension, and who, because of age, physical or mental disability or domestic circumstances, or any other reason, is unable to earn a sufficient livelihood for himself/herself and his/her dependants. Recipients of special benefits include, among others, unmarried women for a period before and after the birth of a child, persons caring for invalid parents or sick relatives/children, and persons ineligible for a pension because of lack of residence qualifications.

The benefit is designed to meet cases of special need and may also be paid as income support over a period if no other social security benefit is payable.

The rate paid may not exceed the rate of unemployment or sickness benefit which could be paid if the claimant were qualified to receive it.

## UNEMPLOYMENT, SICKNESS AND SPECIAL BENEFITS: YEAR ENDED 30 JUNE

	1983	1984	1985
<b>Unemployment beneficiaries:</b>			
Number of benefits granted . . . . .	1,115,323	975,988	860,481
Number on benefit at end of year . . . . .	635,002	584,506	561,400
Average number on benefit at end of each week during year . . . . .	540,198	(b)619,600	(b)581,700
<b>Sickness beneficiaries:</b>			
Number of benefits granted . . . . .	156,632	142,179	141,277
Number on benefit at end of year . . . . .	64,203	62,400	63,004
Average number on benefit at end of each week during year . . . . .	57,684	(b)63,200	(b)62,400
<b>Special benefit beneficiaries:</b>			
Number of benefits granted . . . . .	70,074	95,790	98,812
Number on benefit at end of year . . . . .	20,899	18,293	18,925
Average number on benefit at end of each week during year . . . . .	20,110	(b)19,100	(b)18,500
<b>Amount paid during year(a) \$'000:</b>			
Unemployment . . . . .	2,248,980	2,912,314	2,983,605
Sickness . . . . .	270,776	335,882	364,628
Special benefit . . . . .	89,167	92,782	100,282

(a) Includes additional allowances. (b) Estimated.

**Family allowances**

A family allowance is paid to a person caring for children under sixteen years or full-time students aged 16-24 years who are wholly or substantially dependent on that person. Family allowance is not paid for students receiving Tertiary Education Assistance or other related Commonwealth education allowances. Payment is usually made to the mother. Approved charitable, religious or government institutions are paid family allowances for children in their care.

Twelve months residence in Australia is required if the claimant and the child were not born here, but this requirement is waived if the Department of Social Security is satisfied that they intend to remain in Australia permanently. Under certain conditions, family allowance may be paid to Australians who are temporarily absent overseas.

## FAMILY ALLOWANCES: 30 JUNE 1985

Number of children and students in family	Number of families								
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total(a)
1 . . . . .	270,490	201,287	125,280	69,599	70,655	22,593	8,447	13,356	781,707
2 . . . . .	296,755	233,195	141,008	78,390	83,007	25,097	8,465	17,274	883,191
3 . . . . .	129,507	103,837	65,186	29,125	35,865	11,112	4,038	7,818	386,488
4 . . . . .	36,239	28,521	19,832	6,770	9,369	3,085	1,473	2,109	107,398
5 . . . . .	7,733	6,032	4,658	1,243	1,877	639	492	415	23,089
6 . . . . .	2,192	1,604	1,323	317	518	154	214	100	6,422
7 . . . . .	635	497	430	91	164	36	53	33	1,939
8 . . . . .	228	147	133	36	44	13	23	13	637
9 . . . . .	56	68	46	8	11	5	8	3	205
10 or more . . . . .	40	38	20	4	9	—	1	3	115
<b>Total families</b> . . . . .	<b>743,875</b>	<b>575,226</b>	<b>357,916</b>	<b>185,583</b>	<b>201,519</b>	<b>62,734</b>	<b>23,214</b>	<b>41,124</b>	<b>2,191,191</b>
No. of children in approved institutions . . . . .	4,622	1,880	2,646	317	921	96	101	23	10,606
Amount paid during year (\$'000) . . . . .	537,598	398,679	250,825	137,337	137,697	42,799	(a)	(a)	1,504,951

(a) Expenditure for N.T. and A.C.T. included in expenditure for S.A. and N.S.W. respectively.

**Family income supplement**

Family income supplement is paid subject to an income test to low-income families with one or more children eligible for family allowances so long as they are not in receipt of any Commonwealth pension, benefit or allowance which provides additional payment for dependent children. The number of families in receipt of family income supplement at 30 June 1985 was 26,398. The amount paid during the year 1984-85 was \$40,945,000

**Handicapped child's allowance**

Parents or guardians of a child under sixteen years or a dependent full-time student who is severely handicapped mentally and/or physically, is living in the home, and needs constant care and attention, are entitled to a handicapped child's allowance. The allowance is not subject to an income test, but a residence qualification similar to that for family allowance applies. The allowance is also available to persons on low income who are caring for a

substantially handicapped child and are suffering severe financial hardship as a result of expenditure associated with the child's disability. The number of handicapped child's allowances being paid at 30 June 1985 was 29,562. The total amount paid through these allowances during the year 1984-85 was 28,534,000.

#### **Allowances associated with the Commonwealth Rehabilitation Service (CRS)**

The Commonwealth Rehabilitation Service, which is administered by the Department of Community Services, provides treatment and training for people with a long term disability who are in the broad working age group. Rehabilitation may also be provided to people aged 14 or 15 years who otherwise would be likely to qualify for an Invalid Pension at age 16. Its programs are directed at assisting people to achieve their maximum physical, mental social and/or vocational potential.

The CRS provides services through a range of settings including rehabilitation centres, work adjustment centres, regional rehabilitation units and mobile teams.

Increasingly, the CRS is making use of existing community services to provide comprehensive treatment or training programs. These include educational institutions, health services and industry.

Since March 1983 persons undertaking a Commonwealth rehabilitation program and who would otherwise have been eligible for another pension or benefit are paid a rehabilitation allowance subject to an income test. Living-away-from-home allowance is paid where necessary. Fares and living expenses (including those of an attendant where required) in connection with treatment, training or attendance for an interview or for medical examination may also be paid. Necessary aids, appliances and modifications may be provided free of charge to a person receiving treatment and training or who needs them to assist him or her to engage in a suitable vocation after the discontinuance of his treatment and training or who needs them otherwise to assist in his or her rehabilitation. In 1984-85, 8,538 people commenced rehabilitation.

#### **Portability of social service payment**

Age, invalid and widows' pensions and supporting parent's benefits continue in force for recipients who have left Australia unless they left before 8 May 1973 or their pension or benefit is subject to the provisions of either of the reciprocal agreements with New Zealand or the United Kingdom. In certain cases of hardship, the pension or benefit may continue for people who left before 8 May 1973. The number of Australian pensions being paid overseas under the general portability provisions at 30 June 1985, was 22,933.

#### **Other services of the Department of Social Security and the Department of Community Services**

The Department of Social Security provides a professional social work service and Ethnic and Aboriginal Liaison Office Schemes. The Department of Community Services administer grants to major national welfare organisations such as: Australian Council of Social Service, Australian Council of the Ageing, Australian Council for Rehabilitation of Disabled, Australian Early Childhood Association and to non-government welfare agencies providing emergency relief or in financial difficulties.

To assist in its role of advising the government on income support policy, the Department of Social Security initiates, develops and undertakes experimental projects in the income support area and undertakes research studies.

The Departments provide funding to the Social Welfare Research Centre at the University of New South Wales and provide a grant to the Social Welfare Research Unit of the Australian Council of Trade Unions (ACTU).

### **Commonwealth Government assistance through welfare organisations**

#### **Accommodation for aged and disabled people**

The *Aged or Disabled Persons Homes Act 1954* and the *Aged or Disabled Persons Hostels Act 1972* are designed to encourage the provision of homes in which aged persons may reside in conditions approaching normal domestic life.

To be eligible for assistance under these Acts an organisation must be:

- (i) carried on otherwise than for the purposes of profit or gain to the individual members; and
- (ii) a religious organisation, an organisation of which the principal objects or purposes are charitable or benevolent, an organisation of former members of the defence forces

established in every State or a State branch of such an organisation, an organisation approved by the Governor-General for the purposes of the Act, or a local governing body.

An organisation conducted or controlled by, or by persons appointed by, the Commonwealth or any State Government is not eligible for assistance under either Act.

The Secretary of the Department of Community Services or his delegate may make a grant of money to an organisation as assistance towards meeting the cost of the construction or purchase of a home, including land, to be used permanently for the accommodation of aged persons.

The following table gives information regarding grants approved for each of the past three years. The amounts granted in each year include new grants approved in that year together with adjustments made during the year in respect of grants originally approved in earlier years.

**AGED OR DISABLED PERSONS HOMES ACT AND AGED OR DISABLED PERSONS HOSTELS ACT  
GRANTS AND AMOUNTS APPROVED AND BEDS PROVIDED**

		1982-83	1983-84	1984-85
Grants approved . . . . .	No.	241	176	125
Amounts approved . . . . .	\$'000	60,460	45,447	42,666
<b>Beds provided—</b>				
Self-contained . . . . .	No.	751	478	289
Hostel . . . . .	"	1,672	1,293	1,452
Nursing . . . . .	"	1,455	932	656
<b>Total.</b> . . . . .	"	<b>3,878</b>	<b>2,703</b>	<b>2,397</b>

In addition, the Government introduced upgrading grants under this program in 1984 because of concern that much of the accommodation for aged or disabled people was constructed over 30 years ago and does not meet current standards. The value of grants approved for upgrading of existing accommodation in 1984-85 was \$3.8 million.

The Aged or Disabled Persons Homes Act also provides Hostel Care and Personal Care subsidies to eligible organisations to assist with the recurrent cost of providing hostel care and personal care services to frail aged disabled residents. Organisations may also receive a Respite Care subsidy according to their use of approved respite beds for short term occupancy. The following table gives details of the premises approved, payments made and number of eligible residents aged eighty years or over residing in the approved premises.

**AGED OR DISABLED PERSONS HOMES ACT: HOSTEL CARE, PERSONAL CARE AND RESPITE CARE  
SUBSIDIES, 30 JUNE 1984**

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved premises . . . . .	No.	267	230	168	119	106	22	2	6	920
Residents qualifying . . . . .	No.	16,305	13,532	10,744	7,754	5,559	1,214	82	285	35,605
Subsidies paid, 1984-85. . . . .	\$'000	11,465	8,154	7,094	4,616	3,455	662	54	105	55,475

### Disabled people

Under the *Handicapped Persons Assistance Act 1974*, the Commonwealth provides subsidies to eligible non-profit and local government bodies for the purchase, construction, extension, alteration, rental and maintenance of premises from which special prescribed services for disabled people are provided. Salary subsidies are also available in respect of certain staff of subsidised services.

Prescribed services include training, activity therapy, sheltered employment and residential accommodation. In addition, holiday accommodation, recreational facilities and rehabilitation facilities may be approved for subsidy as ancillary services.

A *training fee* is paid to organisations providing approved sheltered employment for each disabled employee who graduates to open employment. An *open employment incentive bonus* is also paid to each such disabled employee. A *handicapped childrens benefit* is paid to organisations providing approved residential accommodation for disabled children.

During 1984-85 assistance was provided to around 1,250 organisations at a total cost of \$92.9 million. In addition to outlays under the Act, \$0.74 million was provided in 1984-85 to support measures intended to upgrade the effectiveness and the quality of Commonwealth subsidised services for disabled people.

Following a wide-ranging review of Commonwealth programs for disabled people (the *Handicapped Programs Review*) completed in 1985, the Government intends replacing the

Handicapped Persons Assistance Act with new disability services legislation which will incorporate the major recommendations of the Review. During 1985-86, \$4 million is being provided to support a range of demonstration projects aimed at assessing the feasibility of selected reforms recommended by the Review.

#### **Supported Accommodation Assistance**

A new Supported Accommodation Assistance Program (SAAP) was introduced in all States and Territories from 1 January 1985. The new program incorporated former programs such as the Women's Emergency Services Program, the Youth Services Scheme and the Homeless Persons' Assistance Program. SAAP consolidates and improves the co-ordination of former Commonwealth/State and Commonwealth programs and has been developed jointly with States and Territories in consultation with service providers and users.

SAAP aims to provide supported accommodation services and related support services to men, women, young people and their dependants, who are permanently or temporarily homeless as a result of crisis, and who need such assistance to move toward independent living where possible and appropriate.

SAAP provides recurrent and capital non-housing funds to non-profit organisations and local government bodies for supported accommodation such as refuges, hostels and half way houses and for related support services such as meals services, non-clinical community based rape crisis centres, day centres, detached workers and referral services. A complementary new Crisis Accommodation Program (CAP) within the Commonwealth/State Housing Agreement provides capital housing funds for SAAP services. CAP also provides some funding for unsupported accommodation.

SAAP comprises the following three sub-programs:

- Youth Supported Accommodation Program (YSAP)—services for young people aged 12-25 years, and, if applicable, their dependants;
- Women's Emergency Services Program (WESP)—services for women, and women with dependent children, escaping from intolerable domestic circumstances or other crisis situations; and
- General Supported Accommodation Program (GSAP)—services for homeless men, women, and any dependants, and for services which do not clearly come within YSAP or WESP.

The *Supported Accommodation Assistance Act 1985* provides the legislative base for the program, which is administered on a day to day basis by State and Territory governments in accordance with the SAAP Agreement and national guidelines. As a joint Commonwealth/State cost shared program, there is joint Ministerial approval of new services and significant subsidy variations, reviews, evaluations and co-ordination. Commonwealth/State advisory structures involving both levels of government and service providers have been established in States and Territories to advise on program needs and priorities.

In 1983-84 the Commonwealth spent \$14.89 million on programs to be incorporated in SAAP, including the Homeless Persons' Assistance Program. In 1984-85 \$24 million was allocated and \$40.215 million in 1985-86. States and Territories are required to match nominated Commonwealth expenditure on SAAP.

#### **Home and Community Care Program**

In the 1984-85 Budget the Commonwealth Government announced its intention to restructure support for the aged, younger disabled and families in need of home care services through a proposed Home and Community Care (HACC) Program.

The Home and Community Care (or HACC) Program established by the *Home and Community Care Bill 1985* will be a joint Commonwealth/State program. The financial assistance provided under the Bill will assist State and local governments and community organisations to provide a comprehensive range of home and community based care designed to provide basic maintenance and support services. Services are to be targeted at aged or disabled people either directly or through their carers to prevent their unnecessary or premature admission to long-term residential care.

Services in a State funded under four existing Commonwealth Acts will be subsumed in the Program once the State enters into a Home and Community Care Agreement with the Commonwealth. Those Acts are:

- the *States Grants (Home Care) Act 1969*, under which the Commonwealth cost-shares with the States the provision of home care services and senior citizens' centres, and cost-shares with organisations the salaries of welfare officers of senior citizens' centres;

- the *States Grants (Paramedical Services) Act 1969* under which, in the three participating States, the Commonwealth cost-shares the provision of home based paramedical services such as physiotherapy and occupational therapy;
- The *Home Nursing Subsidy Act 1956* which provides for Commonwealth subsidy to home nursing organisations not exceeding the contribution of State or local governments to the home nursing service; and
- the *Delivered Meals Subsidy Act 1970* under which the Commonwealth provides various levels of assistance to organisations delivering meals to the aged or to invalid pensioners.

In addition to the services provided under these existing Acts, the HACC Program will allow for additional initiatives such as community respite care, transport, personal care and education and training for service providers and users.

The Children's Services Program is administered by the Office of Child Care, within the Department of Community Services. It provides grants to State and local governments and community organisations for a flexible network of services for children and their families mainly concentrating on day care services. The general principle guiding approval of grants is one of directing assistance on a needs basis.

Other services funded under the program include special services for migrants, Aborigines and disabled children and research, evaluation and information projects. Block grants towards pre-school education are made to State and Northern Territory Governments.

The Family Support Services Scheme is administered jointly with State and Northern Territory Governments. It provides for a range of coping and counselling skills to be made available to families in stress.

**EXPENDITURE ON CHILDREN'S SERVICES PROGRAM**  
(S'000)

	1981-82	1982-83	1983-84	1984-85
Pre-school . . . . .	33,005	33,090	33,090	33,090
Other Children's Services (including Family Support Services Scheme) . . . . .	47,355	64,954	80,125	122,726
<b>Total . . . . .</b>	<b>80,360</b>	<b>98,044</b>	<b>113,215</b>	<b>155,816</b>

**Emergency relief grants**

This program provides community welfare organisations with grants to help them make emergency relief payments to individuals and families experiencing temporary financial crisis the solution to which is beyond their own resources.

Special provision is made to meet the needs of Aborigines. To improve the effectiveness of the Emergency Relief Program the Minister approved the establishment of a Commonwealth/State Emergency Relief Committee in each State and Territory to recommend which agencies should receive funds. The committee consists of representatives of the Commonwealth Departments of Community Services, Social Security, and Aboriginal Affairs, State welfare departments and the voluntary sector.

**COMMONWEALTH EMERGENCY RELIEF**  
**APPROPRIATIONS 1979-80 TO 1985-86**

Financial Year	Appropriation
	\$
1979-80 . . . . .	500,000
1980-81 . . . . .	500,000
1981-82 . . . . .	500,000
1982-83 . . . . .	2,500,000
1983-84 . . . . .	5,000,000
1984-85 . . . . .	5,950,000
1985-86 . . . . .	6,000,000

**Grants-in-aid to co-ordinating bodies**

The Department of Community Services sponsors a number of organisations which apply for the grants-in-aid program administered by the Department of Special Minister of State.

These grants are provided toward the operating costs of organisations representing the welfare interests of people who are clients of the Department. The organisations must also have a formal, democratic constitution, appropriate expertise and be able to provide, from

their own resources, some input (either monetary or non-monetary and, where appropriate, on a matching basis).

Grants are determined annually by the Special Minister of State and Minister for Finance in consultation with the Minister for Social Security, following consideration by an inter-departmental committee (consisting of representatives of the Departments of the Prime Minister and Cabinet, Special Minister of State and of Finance) of submissions from organisations sponsored by the Department of Community Services.

### **Aboriginals**

A referendum in May 1967 led to the repeal of section 127 of the Constitution which provided that, in reckoning the numbers for census purposes, Aboriginals should not be counted, and to the deletion of the words 'other than the Aboriginal race in any State' from section 51 (xxvi) which relates to the power of the Commonwealth Parliament to make laws in respect to people of any race. The Constitutional amendment, in effect, gave the Commonwealth Government shared power with the State Governments in relation to Aboriginals. The Commonwealth Government's aim is to help Aboriginals become self-managing and self-sufficient while, at the same time, preserving and developing their own distinctive culture. The Commonwealth Department of Aboriginal Affairs which is responsible for policy, planning and co-ordination in respect of Aboriginal affairs at the national level has regional offices in all States and the Northern Territory.

Aboriginal views on the long term goals and objectives which the government should pursue, the programs it should adopt, and on the need for new programs in Aboriginal affairs have in recent years been sought through various Aboriginal advisory organisations such as the National Aboriginal Consultative Council (NACC), (1973-1977), and the National Aboriginal Conference (NAC), (1977-1985). Since membership of the NAC was terminated from 30 June 1985, consultations with Aboriginals have been continuing on the establishment of a new national Aboriginal consultative organisation to replace the NAC.

The Aboriginal Development Commission (ADC), an all-Aboriginal Commission, was established in 1980 by the Commonwealth Government as an independent body. The ADC assists Aboriginal and Torres Strait Islander groups, communities and individuals to acquire land for a variety of purposes, engage in business enterprises, obtain finance for housing and other personal needs, and to receive training where necessary.

### **Migrants**

#### **Intake**

The number of migrants who have come to Australia since the end of the Second World War has passed the 4 million mark. These migrants have contributed significantly to Australia's population which has more than doubled, from 7.4 million at the end of 1945 to 15.6 million at the end of 1984. At this time about 21 per cent of Australia's population was overseas born. Post-war immigration peaked in 1970 with 185,300 settler arrivals, declined thereafter to a low of 54,100 in 1975, increased again to 118,700 in 1981 and decreased to 73,100 in 1984.

#### **Accommodation of migrants**

Migrant Centres provide a residential base for the provision of programs and services for newly arrived refugees and some other migrants.

There are 13 Migrant Centres located in all States and the N.T. with a capacity to accommodate up to 10,000 migrants and refugees. Additionally, 378 migrant transitory flats can accommodate up to 1,900 persons at any time.

Due to a downturn in demand for migrant centre accommodation the Department of Immigration and Ethnic Affairs (DIEA) has recently announced the closure of 4 migrant centres and plans to redevelop other centres into self-contained, self-catering style units. Four of the closed centres (Endeavour, Enterprise, Cabramatta and Fairy Meadow) continue to provide non-residential services such as English tuition and orientation classes.

#### **Ethnic affairs—Services for migrants and refugees**

The Department of Immigration and Ethnic Affairs provides services to facilitate the successful settlement and welfare of migrants and refugees.

In addition, the Department is responsible, through its Ethnic Affairs Division, for advancing policies designed to secure the successful settlement and integration of migrants



into Australian society. These policies include fostering the preservation and sharing of the cultural heritage of migrant communities, and maintenance of harmonious inter-group relations in Australia's multicultural society. The Department provides advice to a number of other departments whose responsibilities are particularly important within this context.

Migrant Services Units operate in all States and Territories to provide support and counselling to individuals and groups of migrants as they settle into the community. These Units consist of a team of social workers supported by welfare officers, many of whom are bilingual, and they offer services from a range of locations such as migrant centres, DIEA offices and in committees where recently-arrived migrants are settling.

Where practicable, migrants will be referred to the local community services most suitable to their needs. DIEA staff are working with the staff in mainstream agencies to assist them to make their services more accessible to migrants.

Departmental activities are complemented by those of social workers and welfare officers employed by voluntary agencies funded by Commonwealth grants administered by the Ethnic Affairs Branch. In many respects these voluntary agencies are best placed to assist migrants. There has been an increase in the number of Grants-in-Aid for the employment of welfare workers by voluntary agencies from 140 to 201 in 1985-86.

As part of its settlement services, the Department provides a free interpreting and translation service to non-English-speaking migrants and refugees, and to members of the host community having dealings with them. The Department also offers a translation service to Commonwealth Departments and other bodies for a fee. At the present time, translation units are operating in Canberra, Melbourne and Sydney.

In 1973, the Telephone Interpreter Service (TIS) was established to help overcome language related communication problems by providing, via the telephone, a 24 hour interpreting, information and referral service. TIS staff interpreters together with community contract interpreters cover over 75 languages. Where necessary and especially in emergency situations, arrangements may be made for the personal attendance of an interpreter. TIS currently operates in Canberra, all State capitals, Darwin and in a number of major provincial centres of migrant population. During the year ended 30 June 1985, a total of 316,867 calls was received by TIS.

Cost-sharing agreements since 1979 have been concluded with the Governments of New South Wales, Victoria, Queensland and South Australia to encourage the establishment or extension of State operated interpreting and translation services in areas of prime State responsibility.

A National Accreditation Authority for Translators and Interpreters (NAATI) was established by the Commonwealth Government in 1977 to develop standards of competence for translators and interpreters in Australia and to test and accredit at those standards. State/Territory Panels for Translators and Interpreters have been established in all States and Territories to administer tests to those seeking accreditation. From 1 July 1983 it became an independent body funded mainly by the Commonwealth and States on a shared basis.

Twenty-three migrant resource centres and nine sub-centres and one pilot project have been established in areas of high migrant density. These resource centres provide support for all agencies (both government and voluntary) which assist migrants, and also provide a focus for community participation and development of local resources to meet migrant needs.

The settlement of refugees has become an important element in the Commonwealth Government's overall migrant settlement program. Most of these refugees are accommodated initially at Commonwealth Government migrant centres where they are able to participate in an initial settlement program designed to facilitate their settlement in the community. In addition, under the Community Refugees Settlement Scheme, numbers of refugees are moved directly from the refugee camps overseas into the Australian community where they are in the care of families, groups and organisations which have undertaken to provide a range of support and assistance.

The Adult Migrant Education Program (AMEP) provides a wide range of language learning opportunities, as well as offering information about Australia, its services and institutions. The Department is responsible for the funding and co-ordination of the program at the national level, while service delivery is provided in the main by Adult Migrant Education Services in each State and Territory.

In 1984-85 expenditure on the Adult Migrant Education Program was \$42m. New enrolments in the Program nationally totalled just over 120,000 persons including 16,000 in courses for new arrivals.

The status of 'Australian citizen' was created under the *Nationality and Citizenship Act 1948* which came into force on 26 January 1949. The relevant Act is now the *Australian Citizenship Act 1948* and under its provisions all new settlers regardless of origin, are required to satisfy uniform requirements for the grant of citizenship. Amendments are expected to be introduced into Federal Parliament soon. In the financial year 1984-85, 107,774 applications for Australian citizenship were received compared with 113,810 in 1983-84. Over 1.7 million new settlers have been granted Australian citizenship since 1949.

## VETERANS' AFFAIRS

The Repatriation Commission, established under the *Repatriation Act 1920*, consists of three full-time members. It is responsible for the administration of the Repatriation Act and associated legislation, all matters of policy, and the general administration and overall supervision of the provision of benefits under the legislation. The Chairman of the Commission is also the Secretary of the Department of Veterans' Affairs, which provides the administrative machinery through which the Commission operates. The central office is in Canberra and there is a branch office, under the control of a Deputy Commissioner, in each State.

The principal functions of the Department are: the payment of disability and dependants' pensions (previously called war pensions) and service pensions and allowances to eligible veterans and their dependants; the provision of medical treatment for veterans for injuries and illnesses accepted as service-related; the provision of medical treatment in certain circumstances for veterans who are suffering from injuries and illnesses whether service-related or not; the provision of medical treatment for war/defence widows and certain dependants of deceased veterans; and provision of a wide range of other benefits for eligible persons. Since 5 October 1976, the *Defence Service Homes Act 1918* has been administered by the Defence Service Homes Corporation (DSHC) within the departmental framework. At the same time, the Department was given responsibility for the Office of Australian War Graves.

Repatriation benefits are provided in respect of service not only in the 1914-18 and 1939-45 Wars but also in the South African War 1899-1902, in the Korea and Malaya operations, in prescribed areas with the British Commonwealth Far East Strategic Reserve (F.E.S.R.) and the Special Overseas Forces and, in certain circumstances, in the Regular Defence Forces or peacekeeping forces.

For detailed information about repatriation pensions, allowances, benefits and services, reference should be made to the annual reports of the Repatriation Commission.

VETERANS' AFFAIRS (excl. DSHC): TOTAL EXPENDITURE(a)  
(S'000)

Class	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
Pensions, allowances and other benefits	966,072	1,193,181	1,329,871	1,719,058	2,035,026	2,334,799
Medical treatment	310,327	357,219	426,360	499,005	561,035	612,238
Administration	49,539	52,885	63,996	69,556	84,848	116,934
Works, rent and maintenance	27,881	24,587	22,136	26,968	43,021	46,687
<b>Total expenditure</b>	<b>1,353,819</b>	<b>1,627,872</b>	<b>1,842,363</b>	<b>2,314,597</b>	<b>2,723,930</b>	<b>3,110,659</b>

(a) Includes expenditure by Departments other than Veterans' Affairs as follows: 1979-80, \$25,072,835; 1980-81, \$21,270,359; 1981-82, \$18,260,360; 1982-83, \$22,738,924; 1983-84, \$27,541,925; 1984-85, \$38,329,971.

## Disability pensions

The first provision for the payment of disability pensions to veterans and pensions to their dependants was made by the Commonwealth Parliament in the *War Pensions Act 1914*. This Act was repealed in 1920 by the *Australian Soldiers' Repatriation Act 1920* (amended from 31 December 1950 to the Repatriation Act). Amendments to the Act in 1943 considerably widened the eligibility provisions, to the benefit mainly of members of the Citizen Military Forces who had not served outside Australia during the 1939-45 War. Further amendments in 1982 extended eligibility to persons who were previously granted eligibility through Cabinet decisions.

Main pension rates vary twice each year; current rates are available from Department of Veterans' Affairs Branch Offices.

**Summary of disability pensions**

The following table provides a summary of disability pensions according to the veteran's war/area of service.

**DISABILITY AND DEPENDANTS' PENSIONS: 1984-85**

	1914-18 War	1939-45 War(a)	Korea, Malaya and F.E.S.R.	Special Overseas Service	Peace time forces	Miscel- laneous	Total
Pensions in force at 30 June 1984	22,808	336,536	9,187	24,234	15,345	211	408,321
Amount paid in pensions in 1984-85	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	837,230
New claims granted	344	12,239	368	1,451	2,634	12	17,038
Restorations	2	276	37	130	80	-	525
Pensions cancelled (gross)	67	3,093	216	598	362	5	4,341
Deaths of pensioners	2,496	8,894	96	60	47	9	11,602

(a) Includes Interim Forces (b) Includes associated allowances.

**Classes of disability pensions**

The following tables provide an analysis of the number of pensions in force, veteran's class of pension, new claims and deaths in 1984-85.

**DISABILITY PENSIONS: NUMBER IN FORCE: 30 JUNE 1985**

Class	1914-18 War	1939-45 War	Korea, Malaya and F.E.S.R.	Special Overseas Service	Peace time forces	Miscel- laneous	Total (b)
Veterans	2,771	144,713	4,089	7,925	5,806	73	165,377
Wives and wife widows	8,619	135,491	3,275	5,968	4,063	78	157,494
Children (b)	1	5,271	1,198	9,795	5,142	1	21,408
War widows	11,166	48,671	487	249	188	57	60,818
Children of deceased veterans	3	484	76	198	140	-	901
Orphans	-	38	1	5	2	-	46
Other dependants	248	1,868	61	94	4	2	2,277
<b>Total (b)</b>	<b>22,808</b>	<b>336,536</b>	<b>9,187</b>	<b>24,234</b>	<b>15,345</b>	<b>211</b>	<b>408,321</b>

(b) Includes 2,863 student children aged 16 years or more.

**DISABILITY PENSIONS FOR INCAPACITATED VETERANS:  
NUMBER IN FORCE, BY CLASS OF PENSION: 30 JUNE 1985**

Class	1914-18 War	1939-45 War(a)	Korea, Malaya and F.E.S.R.	Special Overseas Service	Peace time forces	Miscel- laneous	Total
Special Rate (T & PI or equivalent)	679	21,407	437	340	134	7	23,004
Intermediate Rate	16	894	14	16	11	1	952
General Rate—from 10 per cent to 100 per cent assessed disability	2,076	122,412	3,638	7,569	5,661	65	141,421
<b>Total</b>	<b>2,771</b>	<b>144,713</b>	<b>4,089</b>	<b>7,925</b>	<b>5,806</b>	<b>73</b>	<b>165,377</b>

(a) Includes Interim Forces.

**Summary of disability pensions, 1979-80 to 1984-85**

The following table shows the number of pensions granted, pensions in force and the expenditure for disability pensions in each of the years ended 30 June 1980 to 1985.

**DISABILITY PENSIONS**

Year	Number of disability pensions in force at 30 June						Annual expenditure(a) (\$'000)
	Pensions granted	Deaths	Incapacitated veterans	Dependants of incapacitated veterans	Dependants of deceased veterans	Total	
1979-80	6,141	11,151	178,471	204,265	52,031	434,767	432,001
1980-81	6,732	11,680	174,278	197,603	51,453	423,334	496,310
1981-82	7,325	11,648	170,546	190,970	51,614	413,130	510,675
1982-83	13,420	11,815	168,355	186,859	55,259	410,473	646,470
1983-84	13,119	11,842	166,062	183,105	58,110	407,277	722,660
1984-85	17,038	11,602	165,377	179,420	63,524	408,321	837,230

(a) Includes associated allowances.

**Miscellaneous disability pensions**

The Commission is also responsible for the payment of pensions and allowances to beneficiaries under the *Seamen's War Pensions and Allowances Act 1940* and the *Papua New Guinea (Members of the Forces Benefits) Act 1957*. These miscellaneous pensions are included in the disability pension tables above.

**Service pensions**

The *Repatriation Act 1920* provides for a service pension to be paid (subject to an income test or an asset test from 14 March 1985) to the following persons:

- male veterans who served in a theatre of war (or in a designated *Operational* or *Special Overseas Service* area) and have attained the age of sixty years or are permanently unemployable;
- female veterans who served in a theatre of war, or served abroad or embarked for service abroad and have attained the age of fifty-five years, or are permanently unemployable;
- veterans of the South African War 1899-1902 who were members of a naval or military force or contingent raised in Australia for active service in that war;
- veterans of other British Commonwealth Forces who served outside the country of enlistment or within that country if a campaign medal has been awarded in respect of such service. Ten years residence in Australia is a necessary qualification;
- veterans who served in formally raised allied forces in conflicts in which Australia participated, who served in a theatre of war and at no time served in enemy forces. Ten years residence in Australia is also necessary;
- blind veterans are not subject to the income and asset test.

British Commonwealth and Allied mariners who served in a theatre of war in the 1939-45 war and who satisfied the ten year residency requirement are eligible as from 3 February 1983.

A service pensioner who is also in receipt of a disability pension at or above 50% of the general rate is entitled to free treatment for all disabilities whether service-related or not. In addition to their Medicare entitlements, they are entitled to treatment in Repatriation hospitals, dental treatment, home nursing, allied health services such as physiotherapy, speech therapy and podiatry, home help services and aids, pharmaceuticals, free hearing tests and hearing aids and all optical treatment (including spectacles).

Main pension rates vary twice each year; current rates are available from the Department of Veterans' Affairs' Branch Offices.

The following tables give an analysis of the total number of pensions in force, new claims granted and deaths in 1984-85.

**SERVICE PENSIONS<sup>(a)</sup> 1984-85**

		1914-18 Wars	1939-45 War	Korea- Malaya operations	Special Overseas Service	British Common- wealth	Allied Forces	Miscel- laneous	Total
New claims granted . . . . .	No.	106	31,048	700	385	7,118	1,133	395	40,885
Restorations . . . . .	"	4	309	10	3	51	6	4	387
Cancellations (gross) . . . . .	"	556	11,846	99	64	801	168	138	13,672
Deaths . . . . .	"	984	8,394	94	13	667	80	26	10,258
Pensions in force at 30 June 1984 . . . . .	"	5,684	332,872	2,994	1,201	41,735	6,182	1,831	392,499
Amount paid in pensions in 1984-85 <sup>(b)</sup> . . . . .	\$'000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,477,874

(a) Includes wives and widows. (b) Includes associated allowances.

**Classes of service pensions**

The following table provides a summary of Service Pensions according to the veteran's war/area of service.

## SERVICE PENSIONS: NUMBER IN FORCE: 30 JUNE 1985

Class	1914-18 War	1939-45 War	Korea- Malaya operations	Special Overseas Service	British Common- wealth	Allied Forces	Miscell- aneous	Total
Veterans—								
old age . . . . .	3,540	158,391	653	94	21,176	3,147	886	187,887
permanently unemployable . . . . .	429	33,898	1,177	617	2,412	304	173	39,010
Tuberculosis(a) . . . . .	9	776	14	1	8	—	—	808
Total . . . . .	3,978	193,065	1,844	712	23,596	3,451	1,059	227,705
Wives and widows . . . . .	1,706	139,807	1,150	489	18,139	2,731	772	164,794
<b>Total . . . . .</b>	<b>5,684</b>	<b>332,872</b>	<b>2,994</b>	<b>1,201</b>	<b>41,735</b>	<b>6,182</b>	<b>1,831</b>	<b>392,499</b>

(a) Eligibility on these grounds ceased on 2 November 1978.

The following table provides a summary of Service Pensions.

## SERVICE PENSIONS

	Pensions granted	Deaths	Pensions in force			Annual expenditure(a) (\$'000)
			Veterans	Wives and Widows	Total	
1979-80 . . . . .	40,735	7,952	146,370	93,594	239,964	525,178
1980-81 . . . . .	46,189	8,966	163,237	108,841	272,078	686,487
1981-82 . . . . .	42,766	8,894	178,064	121,838	299,902	807,537
1982-83 . . . . .	57,012	9,604	200,492	140,656	341,148	1,057,950
1983-84 . . . . .	51,830	9,866	218,660	156,845	375,505	1,294,279
1984-85 . . . . .	40,885	10,258	227,705	164,794	392,499	1,477,874

(a) Includes associated allowances.

### Medical treatment for veterans and dependants of veterans

Medical treatment is provided for all disabilities which have been accepted as service-related, and for pulmonary tuberculosis and cancer not related to service. In addition, and subject to certain conditions, treatment is provided for most non-service-related disabilities for: incapacitated veterans receiving disability pensions at or above the maximum (100 per cent) General Rate; 1939-45 War veterans receiving both service pension at any rate and disability pension at the 50 per cent rate or higher; veterans or nurses who served in the 1914-18 War; veterans of the Boer War; ex-prisoners-of-war; war widows and certain other dependants of deceased male veterans whose deaths have been accepted as service-related, and of deceased Special Rate pensioners; and certain service pensioners.

The Department's clientele is becoming largely an aged one. Special emphasis is given to caring for the aged, aimed at limiting the dependence of Veterans and War Widows on nursing home care and encourages the alternatives of home care.

Treatment is provided at six Repatriation general hospitals (one in each State), three auxiliary hospitals and an ANZAC hostel in Victoria. The total number of available beds for patients in wards or parts of wards open for use in all these institutions at 30 June 1985 was 2,631 and expenditure during 1984-85 amounted to \$235,687,077. In addition, expenditure of \$376,551,403 was incurred during 1984-85 on medical services outside these institutions.

### Community patients

Where spare bed capacity exists in the Repatriation hospitals, patients may be admitted from the general community to a level not exceeding 20 per cent of the total occupied beds of the hospital.

### Repatriation hospitals and institutions

Details of full-time staff in Repatriation general hospitals and other Repatriation institutions are given in the following table.

## REPATRIATION HOSPITALS AND INSTITUTIONS: FULL-TIME OPERATIVE STAFF: 30 JUNE 1985

Type of institution	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
General hospitals . . . . .	2,480	1,541	1,179	762	875	221	7,058
Other in-patient institutions . . . . .	256	138	77	—	—	—	471
Limb and appliance centres . . . . .	68	71	28	25	16	11	219
<b>Total . . . . .</b>	<b>2,804</b>	<b>1,750</b>	<b>1,284</b>	<b>787</b>	<b>891</b>	<b>232</b>	<b>7,748</b>

The following table gives details of in-patients treated at Repatriation General Hospitals and other Repatriation institutions in each State (including community patients). The figures shown refer to treatment episodes, e.g. a person who is admitted to hospital twice during a year is counted twice.

**REPATRIATION GENERAL HOSPITALS AND INSTITUTIONS: IN-PATIENTS TREATED, 1984-85**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>REPATRIATION GENERAL HOSPITALS</b>							
<i>In-patients at beginning of year</i>	571	361	320	207	282	71	1,812
<i>Admissions and re-admissions during year</i>	19,200	14,706	10,798	7,265	9,153	2,343	63,465
<i>Total in-patients treated</i>	19,771	15,067	11,118	7,472	9,435	2,414	65,277
<i>Discharges (including deaths)</i>	19,098	14,730	10,765	7,247	9,172	2,342	63,354
<i>In-patients at end of year</i>	673	337	353	225	263	72	1,923
<i>Average daily beds occupied</i>	618	358	349	220	266	66	1,876
<b>REPATRIATION AUXILIARY HOSPITALS</b>							
<i>In-patients at beginning of year</i>	165	126	55	—	—	—	346
<i>Admissions and re-admissions during year</i>	1,755	598	523	—	—	—	2,876
<i>Total in-patients treated</i>	1,920	724	578	—	—	—	3,222
<i>Discharges (including deaths)</i>	1,760	609	515	—	—	—	2,884
<i>In-patients at end of year</i>	160	115	63	—	—	—	338
<i>Average daily beds occupied</i>	159	115	61	—	—	—	335

In addition to the repatriation institutions, eligible patients are treated in other country and metropolitan hospitals and nursing homes at departmental expense. During 1984-85, 40,432 Repatriation in-patients were accommodated and treated in non-departmental hospitals and 6,757 in nursing homes.

Repatriation psychiatric patients requiring custodial care for a service related disability are, by agreement with the State Governments, accommodated at the expense of the Department of Veterans' Affairs in separate wings of psychiatric hospitals administered by the State authorities. Excluding 51 on trial leave, there were 356 repatriation patients in these hospitals at 30 June 1985.

Out-patient treatment is provided throughout Australia at repatriation hospitals and clinics and through the Repatriation Local Medical Officer Scheme. During 1984-85, 842,807 out-patients were treated at Repatriation institutions, and local medical officers consultations totalled 2,836,884. The number of Repatriation local medical officers in Australia at 30 June 1985 was 11,288.

#### **Other medical services**

Eligible Repatriation patients may also be provided with: medicines, drugs and dressings through the Repatriation Pharmaceutical Benefits Scheme; services of allied health professionals including physiotherapy and podiatry; optometrical services including spectacles; dental treatment through the Local Dental Officer Scheme; rehabilitation and social work services; counselling through the Vietnam Veterans Counselling Service; surgical aids and aids-to-daily living.

#### **Artificial limb and appliance services**

A wide range of artificial limbs and other surgical aids is supplied by the Repatriation Artificial Limb and Appliance Centre in each State capital and by sub-centres in Darwin, Townsville, Canberra, Newcastle and Albury. A mobile workshop operates in Victoria to provide services to remote locations. In addition, the Department maintains the Central Development Unit located in Melbourne, and engages in research and development in the prosthetic and orthotic field.

Since 1973, artificial limbs have been provided free of charge to all members of the community who need them (except where patients are eligible for compensation), either through the Department's Repatriation Artificial Limb and Appliance Centres or on order through commercial limb-makers. The number of limbs supplied through the Department has increased significantly as the community has taken advantage of the free-limbs scheme.

Details of production at all centres during 1984-85 are as follows: arms 150; legs, 2,412; surgical and adapted footwear, 6,545; other surgical appliances, 1,153; and repairs, 24,724. In addition the Department purchased from commercial manufacturers 2,235 legs, 146 arms and 6,129 limb repairs.

## **General Repatriation benefits and miscellaneous**

### **Other activities of Department of Veterans' Affairs**

In addition to the payment of pensions and the provision of medical treatment, the Department also provides various benefits and allowances designed to meet the needs of special groups of veterans and their dependants. These include the Soldiers' Children Education Scheme.

In addition, gift cars and an annual allowance for their upkeep are provided for veterans who, as a result of service, have suffered the amputation of both legs above the knees or amputation of one leg above the knee plus any two other amputations (above the ankle or at or above the wrist) or complete paraplegia resulting the total loss of the use of both legs. A grant of up to \$550 may be made towards the funeral expenses of eligible veterans and certain of their dependants. Temporary Incapacity Allowance may be paid to a veteran whose stay in hospital together with post-hospital convalescence or other treatment on a full-time basis exceeds 28 days. Payment of up to \$10 may be made to provide such necessities as meals, sleeping accommodation, etc., for veterans in need of immediate relief. Also, certain concessions in telephone rental charges are provided for some classes of veterans and their dependants, including blinded veterans, war and defence widows and certain service and Special Rate disability pensioners. Veterans who have been blinded as a result of service may be issued with talking book machines. The Royal Victorian Institute for the Blind supplies 'book' records or cassettes for these machines free of charge, thus enabling the blind to enjoy a wide range of literature.

Expenditure in 1984-85 on general Repatriation benefits was \$19,695,000 comprising Soldiers' Children Education Scheme, \$3,402,000; recreation transport allowance, \$1,857,000; and other benefits, \$14,436,000.

As at 30 June 1985, trust and other funds administered by the Department of Veterans' Affairs held \$56,000 in securities (face value) and \$2,039,000 in cash, a total of \$2,095,000.

Reciprocal arrangements with the United Kingdom, New Zealand and other countries provide for the payment of pensions, etc., to eligible Australian veterans living overseas and to eligible veterans from overseas who are living in Australia.

### **Soldiers' Children Education Scheme**

The Soldiers' Children Education Scheme was established in 1921 and operates to assist and encourage eligible children in acquiring a standard of education compatible with their aptitude and ability. Children of veterans whose deaths have been accepted as service-related; or of veterans who died from causes not service-related but who were receiving at the date of death a disability pension at a Special Rate for blindness, total and permanent incapacity, or amputation of two or more limbs; or of veterans who, as a result of service, are blinded totally and permanently incapacitated; or of deceased veterans who served in a theatre of war if the child is not being cared for by the other parent are eligible. From the commencement of primary education until the child reaches twelve years of age, school requisites and fares are provided. From the commencement of secondary education or from the age of twelve years, whichever is earlier, an education allowance is payable while the child is undertaking primary or secondary education or a course of specialised education or training necessary for a career.

All education allowances are subject to an income test, i.e. the amount of education allowance payable depends on the amount of income a child receives over the allowed limit. Weekly rates of allowances vary from time to time; current rates are available from the Department of Veterans' Affairs' Branch Offices.

The following tables show the costs of education under the scheme for the year ended 30 June 1985, and the number of children in receipt of benefit at 30 June 1985.

**SOLDIERS' CHILDREN EDUCATION SCHEME: EXPENDITURE: 1984-85**  
(S'000)

	<i>N.S.W.(a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Cost of education of beneficiaries	1,230.4	843.3	636.3	292.4	237.8	146.0	3,386.2

(a) Includes A.C.T. (b) Includes N.T. (c) Excludes overseas expenditure of \$15,300.

**SOLDIERS' CHILDREN EDUCATION SCHEME: NUMBER RECEIVING BENEFITS AT 30 JUNE 1985**

<i>Type of training</i>	<i>N.S.W.(a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Over-seas</i>	<i>Total</i>
At school—								
Primary (c) . . . . .	150	72	159	46	48	31	—	506
Secondary . . . . .	465	252	292	124	99	100	5	1,337
<i>Total at school</i> . . . . .	<i>615</i>	<i>324</i>	<i>451</i>	<i>170</i>	<i>147</i>	<i>131</i>	<i>5</i>	<i>1,843</i>
Tertiary/professional . . . . .	229	163	91	60	67	21	3	629
Technical . . . . .	—	61	14	—	—	5	—	80
Industrial . . . . .	31	21	13	16	11	6	—	98
<b>Grand total</b> . . . . .	<b>875</b>	<b>569</b>	<b>569</b>	<b>246</b>	<b>220</b>	<b>163</b>	<b>8</b>	<b>2,650</b>

(a) Includes A.C.T. (b) Includes N.T. (c) Not in receipt of an education allowance.

**Re-establishment benefits for former regular servicemen**

Subject to prescribed conditions, vocational training and business loans were provided for former regular servicemen with a view to ensuring that they were not at a disadvantage when they returned to civil life. Loans up to \$5,000 (business and professional) and \$10,000 (agricultural) were available to veterans in these categories who satisfied prescribed requirements in respect of suitability of their proposed business propositions and adequacy of security. The loans were administered by the Department of Veterans' Affairs. Legislation introduced in 1985 meant that no loans applications could be made after 14 May 1985.

**HOUSEHOLD EXPENDITURE**

Official Australian involvement in household expenditure surveys can be traced back to the beginning of this century. In 1910-11, a survey, entitled "Inquiry into the Cost of Living in Australia", was undertaken by the then Commonwealth Bureau of Census and Statistics (now the Australian Bureau of Statistics). During this survey diaries were distributed to some 1,500 volunteers who were asked to keep records of all expenditures over the twelve months period from July 1910 to June 1911. Only 222 diaries were returned, which severely impaired the reliability of the results.

Because of the poor response to the 1910-11 inquiry, the Bureau conducted a further expenditure inquiry in 1913 which was intended to achieve a higher response rate by reducing the diary-keeping period to four weeks. However, the response was again small, with only six percent of the 7,000 diaries returned.

The next major Household Expenditure Survey was not conducted until 1974. This survey ran from July 1974 till June 1975. It was based on a sample of approximately 13,550 private dwellings selected from the six State capital cities and Canberra, from which about 9,100 fully responding households were obtained.

A second expenditure survey with respect to the year 1975-76 was commenced on 1 July 1975. The sample size was approximately 5,900 responding households. Geographical coverage was, however, extended beyond the six State capital cities and Canberra to include Darwin, other urban areas and the rural community.

The 1984 Household Expenditure Survey was the third major survey of its kind undertaken by the Australian Bureau of Statistics. It was conducted continuously over the twelve months January to December 1984. The survey was designed to find out how the expenditure pattern of private households varies according to income level and other characteristics such as household size, composition, location and principal source of income.

**Scope and coverage**

The 1984 survey covered both rural and urban areas (except remote and sparsely settled areas) in all States and Territories. Only private dwellings and caravan sites were included in the survey. Private dwellings are houses, flats, home units, garages, tents and any other structures used as private places of residence at the time of the survey. Hotels, boarding houses, hospitals, etc. were regarded as 'special dwellings' outside the scope of the survey.



Information was collected on a household basis rather than for selected individuals in the population, because many items of expenditure such as food, accommodation and household goods and appliances relate to the household as a unit.

The following households and individuals were excluded from the survey: foreign diplomatic households and foreign diplomatic staff households; foreign defence force staff households; visitors staying with a household for less than six weeks after the initial interview; households with one or more usual members, who were spenders, who could not be interviewed within 14 days after the initial approach; and households with one or more usual members, present at the initial interview, who expected to be absent at the end of the diary-keeping period.

#### **Data collection and processing**

Trained interviewers approached selected households to obtain their co-operation in the completion of several questionnaires. Each household was asked for details of large or infrequent items of expenditure (e.g. purchase of vehicles and property, and the payment of household bills such as electricity and gas) and for details of income from all sources. In addition, a diary was provided to each household member aged 15 years or more, in which they were requested to record, on a daily basis, a description and value for all items purchased over the following two weeks. (Because of anticipated differences in spending patterns in rural areas compared with metropolitan and other urban areas, members of rural households selected in the 1984 survey were issued with four-week diaries.)

Apart from expenditure and income information, particulars of the composition of the household were also obtained together with basic demographic information about members of the household such as their age, sex, marital status, occupation and employment status. This information enabled households to be classified according to size, composition, etc.

Processing of the data was carried out in three phases. Firstly, during the collection phase, the interviewer checked the returns for any apparent inaccuracies and inconsistencies. Secondly, on receipt in the ABS central office, all returns were clerically edited and all payments in the diary were assigned a commodity code. Thirdly, data was transferred to computer disk and various computer operations were performed to ensure, as far as possible, that the data was correct. In addition, expenditure and income data were converted to a weekly equivalent, and expenditure, income and other totals and the classificatory variables required for tabulation purposes were derived. Expansion factors ('weights') were inserted in respondent household records to enable the sample data to be expanded to obtain estimates for the total population.

#### **Definitions**

A *household* was defined as a group of people who live together (in a single dwelling) as a single unit in the sense that they have common housekeeping arrangements; i.e. they have some common provision for food and other essentials of living. Persons living in the same dwelling but having separate catering arrangements constitute separate households.

The 1984 survey was based on an acquisitions approach. This means that the expenditure related to goods and services acquired during the reference period, whether or not those goods were paid for or consumed, e.g. goods purchased by bankcard were counted as expenditure at the time they were acquired rather than at the time the bankcard bill was paid. *Expenditure* is net of refunds or expected refunds (e.g. payments for doctor's visits are net of any refunds received or expected from Medicare). Information about most types of expenditure was obtained from the diary, although some infrequently reported items of expenditure were collected on a 'recall' or last payment basis. The length of the recall period ranged from two years for house purchases to three months for health expenses.

*Income* was defined as gross income from all sources before taxation and other deductions were made, and was collected from all members of the selected household aged 15 years or over. The main components of income are: wages and salaries (including income-in-kind received from an employer); income derived from self-employment (including wages and income-in-kind taken from the business); Government pensions and benefits; income from investments (including interest, dividends, royalties and rent); and other regular income (including educational grants and scholarships, benefits received from an overseas government, income received for professional advice outside the normal job situation, superannuation, Worker's Compensation, alimony or maintenance, and any other allowances regularly received).

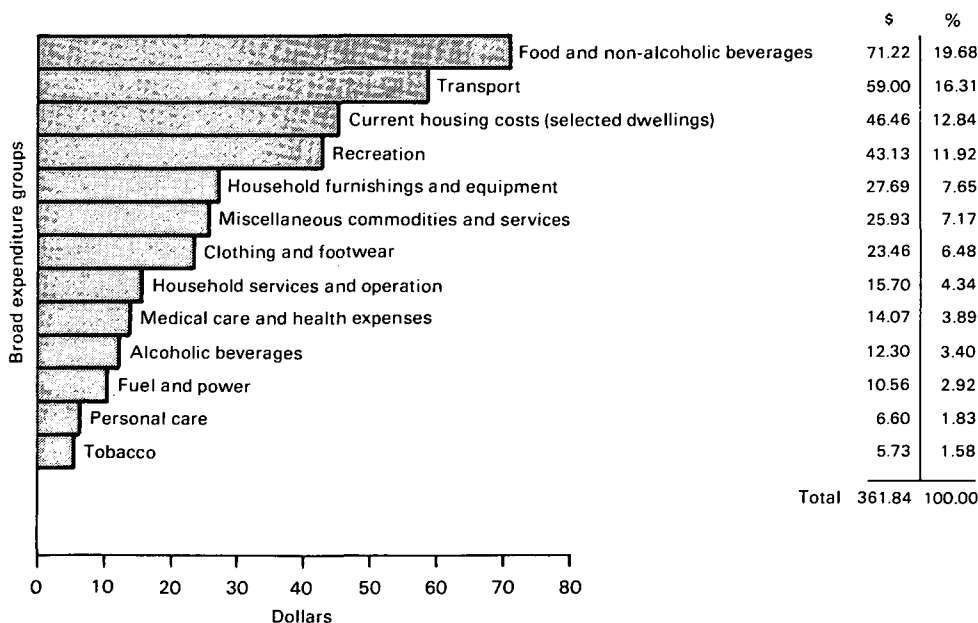
The *head of household* was taken to be that person nominated by the member(s) of the household as the 'head'.

*Family composition of the household* classification was divided into three broad groupings (single families, multiple families and households with only unrelated persons present, including single person households). Additional categories were formed according to the number of dependent (i.e. all persons aged less than 15 years and those aged 15-20 who were full-time students) and non-dependent offspring, the presence of non-family individuals, the number of unrelated persons and the identification of single parent families within the household.

### Summary of findings

At the Australia level, average weekly household expenditure (see figure below) on *food and non-alcoholic beverages* (\$71.22 or 19.7% of total expenditure on commodities and services), on *transport* (\$59.00 or 16.3%) and on *current housing costs (for selected dwellings)* (\$46.46 or 12.8%) accounts for 48.8% of total expenditure. Much less significant is the expenditure on *personal care* (\$6.60 or 1.8%) and on *tobacco* (\$5.73 or 1.6%).

AVERAGE WEEKLY HOUSEHOLD EXPENDITURE ON COMMODITIES AND SERVICES,  
AUSTRALIA, 1984



### PLATE 30

In the lower income ranges, average expenditure exceeded average income as defined (this does not imply that all households in the lower income ranges have expenditure which exceeds income), while in the higher income ranges average income substantially exceeded average expenditure (see below). It should be noted that some households will have financed some items of expenditure from savings and from other sources such as loans, receipts of maturing insurance policies, gifts, windfall gains and profits from the sale of assets which are not included as income as defined for the survey. In addition, some households classified to the lower income ranges may have had lower than usual income during the data reference period, while still maintaining their normal level of expenditure. For the medium and higher income ranges, income tax payments were a large part of the difference between income and expenditure as defined.

Variations in expenditure can be observed over a range of characteristics, e.g. between States and Territories, different family compositions of households, household income, and age of household head. Detailed results of the survey have been published in a series of publications available on request to the ABS. Some unpublished tables are also available on request.

**1984 HOUSEHOLD EXPENDITURE SURVEY: HOUSEHOLD EXPENDITURE BY HOUSEHOLD INCOME QUINTILE GROUP, AUSTRALIA (a)**

	Average Weekly Household Gross Income Distribution (\$)					All households
	0—	172—	315—	473—	676 or more	
	171	314	472	675		
	Lowest 20%	Second quintile group	Third quintile group	Fourth quintile group	Highest 20%	
<b>AVERAGE WEEKLY HOUSEHOLD EXPENDITURE (\$) (b)</b>						
<b>Broad Expenditure Group</b>						
<b>Commodity or service</b>						
Current housing costs (selected dwelling)	25.92	35.20	50.27	55.13	65.85	46.46
Fuel and power (c)	7.25	9.28	10.68	11.53	14.06	10.56
Food and non-alcoholic beverages	38.53	57.70	69.23	81.73	108.97	71.22
Alcoholic beverages	3.88	8.12	11.53	15.48	22.52	12.30
Tobacco	3.13	5.50	6.21	6.54	7.25	5.73
Clothing and footwear	8.82	15.43	19.90	25.64	47.56	23.46
Household furnishings and equipment	11.49	19.38	26.12	34.12	47.38	27.69
Household services and operation	9.55	13.10	14.85	17.15	23.85	15.70
Medical care and health expenses	6.14	10.42	14.42	16.58	22.82	14.07
Transport (d)	19.98	41.67	56.02	72.18	105.25	59.00
Recreation	16.75	27.24	39.80	51.56	80.38	43.13
Personal care	3.18	4.77	5.98	7.76	11.33	6.60
Miscellaneous commodities and services	9.73	14.42	22.88	32.86	49.81	25.93
<b>Total commodity or service expenditure</b>	<b>164.35</b>	<b>262.23</b>	<b>347.88</b>	<b>428.26</b>	<b>607.04</b>	<b>361.84</b>
<b>Selected other payments</b>						
Income tax	6.28	25.90	66.28	105.15	197.07	80.07
Mortgage payments-principal (selected dwelling)	1.76	3.32	6.73	8.80	11.83	6.49
Other capital housing costs (e)	7.25	7.64	16.66	21.39	37.16	18.01
Superannuation and life insurance	0.93	3.46	10.37	16.40	26.43	11.51
<b>HOUSEHOLD CHARACTERISTICS</b>						
Average weekly household income (\$) (f)	116.23	238.47	389.13	568.57	956.97	453.60
Average number of persons per household (number)	1.67	2.68	3.06	3.20	3.57	2.84
Average age of household head (years)	59.72	49.55	42.04	40.93	42.99	47.05
Number of households in sample	1,772	1,811	1,933	2,017	2,038	9,571
<i>Estimated total number in population:</i>						
Households ('000)	1,005.5	1,013.1	1,007.2	1,007.7	1,005.7	5,039.2
Persons ('000)	1,683.3	2,710.4	3,081.3	3,222.7	3,593.2	14,290.9

(a) The quintile groups in this table are 20% groupings of the estimated population when households are ranked in ascending order according to each household's total gross weekly income. (b) The average obtained when the total estimated expenditure for a particular broad expenditure group is divided by the estimated number of households within the scope of the survey in the relevant quintile group. (c) Excluded from this item are fuel and power for motor vehicles, which are included in Transport. (d) Includes fuel and power for motor vehicles. (e) Includes purchases of dwellings and other property; additions/extensions and renovations to dwellings; outside building and swimming pools; and payments to landscape contractors. (f) Household income is the sum of the gross weekly income of all household members.

**1984 HOUSEHOLD EXPENDITURE SURVEY:  
HOUSEHOLD EXPENDITURE BY STATES AND TERRITORIES**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Australia</i>
<b>AVERAGE WEEKLY HOUSEHOLD EXPENDITURE (\$) (a)</b>									
<b>Broad Expenditure Group</b>									
<b>Commodity or service</b>									
Current housing costs (selected dwelling) . . . . .	52.05	45.70	43.17	36.63	41.50	39.04	67.42	60.78	46.46
Fuel and power (b) . . . . .	9.76	12.19	9.27	10.72	10.37	10.91	10.71	13.57	10.56
Food and non-alcoholic beverages . . . . .	73.14	73.18	69.32	62.79	69.18	62.80	88.24	86.06	71.22
Alcoholic beverages . . . . .	13.13	11.11	12.21	11.49	13.24	9.45	25.04	15.05	12.30
Tobacco . . . . .	5.65	6.41	4.63	5.50	6.27	5.56	9.60	4.42	5.73
Clothing and footwear . . . . .	26.26	24.21	18.80	20.66	20.72	23.18	17.85	29.54	23.46
Household furnishings and equipment . . . . .	28.85	27.67	23.04	29.84	28.54	23.93	37.26	35.62	27.69
Household services and operation . . . . .	16.20	15.86	14.92	14.30	15.74	13.16	22.89	20.07	15.70
Medical care and health expenses . . . . .	14.07	15.40	13.17	13.64	12.72	11.40	15.33	15.92	14.07
Transport (c) . . . . .	57.22	61.92	58.24	54.89	62.47	47.59	68.47	80.93	59.00
Recreation . . . . .	42.34	45.89	40.48	36.47	46.50	41.01	60.83	59.78	43.13
Personal care . . . . .	6.74	6.89	6.01	6.72	6.24	5.70	7.01	7.87	6.60
Miscellaneous commodities and services . . . . .	27.91	23.89	27.33	20.52	26.52	18.17	32.82	42.76	25.93
<b>Total commodities or service expenditure . . . . .</b>	<b>373.31</b>	<b>370.31</b>	<b>340.58</b>	<b>324.18</b>	<b>360.01</b>	<b>311.90</b>	<b>463.46</b>	<b>472.38</b>	<b>361.84</b>
<b>Selected other payments</b>									
Income tax . . . . .	82.35	85.35	69.32	67.63	81.82	66.06	106.55	131.49	80.07
Mortgage payments principal (selected dwelling) . . . . .	6.81	6.43	6.43	5.26	7.09	4.82	5.06	7.95	6.49
Other capital housing costs (d) . . . . .	24.15	16.70	10.75	9.36	21.44	6.78	*25.82	*24.84	18.01
Superannuation and life insurance . . . . .	10.93	12.07	11.14	10.75	11.47	10.53	19.77	23.25	11.51
<b>HOUSEHOLD CHARACTERISTICS</b>									
Average weekly household income (\$) (e) . . . . .	458.43	472.22	424.07	417.13	452.87	392.47	583.96	627.97	453.60
Average number of persons per household (number) . . . . .	2.82	2.83	2.93	2.73	2.82	2.80	3.03	3.03	2.84
Average age of household head (years) . . . . .	47.34	47.64	46.95	47.52	45.33	46.79	37.44	41.83	47.05
Number of households in sample . . . . .	2,040	1,947	1,504	1,049	1,084	718	587	642	9,571
<i>Estimated total number in population:</i>									
Households . . . . . ('000)	1,766.9	1,320.6	794.5	461.6	450.9	144.5	26.0	74.3	5,039.2
Persons . . . . . ('000)	4,983.9	3,737.1	2,329.8	1,261.7	1,269.7	404.7	78.8	225.2	14,290.9

(a) The average obtained when the total estimated expenditure for a particular broad expenditure group is divided by the estimated number of households within the scope of the survey. (b) Excluded from this item are fuel and power for motor vehicles, which are included in Transport. (c) Includes fuel and power for motor vehicles. (d) Includes purchases of dwellings and other property; additions/extensions and renovations to dwellings; outside building and swimming pools; and payments to landscape contractors. (e) Household income is the sum of the gross weekly income of all household members. \* Subject to sampling variability too high for most practical purposes.

**1984 HOUSEHOLD EXPENDITURE SURVEY: HOUSEHOLD EXPENDITURE BY FAMILY COMPOSITION OF THE HOUSEHOLD, AUSTRALIA**

Broad Expenditure Group Commodity or service	Married couple family households without non-family individuals present				Single parent house- holds	Single person house- holds	Other family and non- family house- holds(a)	All house- holds
	Husband and wife with:			Non- dependent offspring only				
	Husband and wife only	Dependent and non- dependent children only	Dependent and non- dependent offspring					
AVERAGE WEEKLY HOUSEHOLD EXPENDITURE (\$) (b)								
Current housing costs (selected dwelling)	40.71	57.82	45.16	34.73	47.82	33.05	58.60	46.46
Fuel and power(c)	9.60	12.85	15.35	13.47	9.94	5.89	10.92	10.56
Food and non-alcoholic beverages	61.41	85.04	121.39	106.65	58.92	31.97	85.43	71.22
Alcoholic beverages	11.77	10.54	19.31	24.06	6.06	6.68	20.80	12.30
Tobacco	4.66	5.81	8.90	9.35	6.13	2.89	9.06	5.73
Clothing and footwear	19.53	25.69	46.99	40.48	20.84	8.16	33.10	23.46
Household furnishings and equipment	31.24	29.85	33.23	41.91	23.04	13.90	29.31	27.69
Household services and operation	15.11	19.24	21.46	18.71	13.59	8.88	15.79	15.70
Medical care and health expenses	13.79	16.80	22.07	23.16	6.97	6.52	14.70	14.07
Transport(d)	53.67	59.67	116.27	118.38	40.25	24.09	77.13	59.00
Recreation	40.74	44.79	66.77	67.72	27.42	22.45	61.83	43.13
Personal care	5.85	6.79	12.07	10.98	6.40	3.50	8.19	6.60
Miscellaneous commodities and services	23.41	30.90	43.13	33.36	24.81	10.94	32.36	25.93
<b>Total commodity or service expenditure</b>	<b>331.49</b>	<b>405.78</b>	<b>572.13</b>	<b>542.96</b>	<b>292.18</b>	<b>178.92</b>	<b>457.21</b>	<b>361.84</b>
<b>Selected other payments</b>								
Income tax	74.09	98.31	128.35	125.29	24.55	38.91	92.01	80.07
Mortgage payments principal (selected dwelling)	6.12	10.38	9.06	4.49	3.84	2.51	4.84	6.49
Other capital housing costs(e)	18.15	24.37	*15.99	*19.45	*6.96	9.78	19.92	18.01
Superannuation and life insurance	9.89	16.24	19.03	17.13	3.51	4.65	11.06	11.51
HOUSEHOLD CHARACTERISTICS								
Average weekly household income (\$) (f)	416.40	511.85	750.47	712.36	285.08	224.32	565.77	453.60
Average number of persons per household (number)	2.00	4.11	4.96	3.35	3.12	1.00	3.00	2.84
Average age of household head (years)	53.67	36.66	46.98	56.01	35.36	56.07	45.08	47.05
Number of households in sample	2,196	3,018	472	587	494	1,733	1,071	9,571
Estimated total number in population:								
Households	(000) 1,204.8	1,495.8	252.0	325.6	251.4	961.5	548.1	5,039.2
Persons	(000) 2,409.6	6,151.3	1,248.8	1,091.5	784.6	961.5	1,643.5	14,290.9

(a) Includes married couple and single parent families living in multiple family households. (b) The average obtained when the total estimated expenditure for a particular broad expenditure group is divided by the estimated number of households within the scope of the survey. (c) Excluded from this item are fuel and power for motor vehicles, which are included in Transport. (d) Includes fuel and power for motor vehicles. (e) Includes purchases of dwellings and other property; additions/extensions and renovations to dwellings; outside building and swimming pools; and payments to landscape contractors. (f) Household income is the sum of the gross weekly income of all household members. \* Subject to sampling variability too high for most practical purposes.

## DISTRIBUTION OF INCOME

Surveys of incomes have been conducted by the ABS at irregular intervals. In the last such survey, conducted in the period September to November 1982, income was collected both on a last financial year basis, that is in respect of 1981-82, and on a current basis, that is at the time of interview.

As has been customary in such surveys, income was collected in respect of each of the following sources: wages or salaries; own business, trade or profession; government cash benefits; superannuation; interest, rent dividends; other sources. These were then aggregated to arrive at total income.

The survey was designed to enable the production of estimates both for individuals and for groups of individuals such as income units, families and households. Summary results have been released in the following ABS publications: *Income of Individuals, Australia, 1981-82* (6502.0); *Income of Income Units, Australia 1981-82* (6523.0). Detail of concepts, definitions, etc. employed in the survey and observations on the quality and reliability of the data can be found in these publications.

Further detail from these surveys can be found in Year Book No. 69.

**ALL INCOME RECIPIENTS: DECILE CLASSES, INCOME SHARE AND MEAN ANNUAL INCOME  
AUSTRALIA, 1978-79 AND 1981-82**

Decile class	Males		Females		Persons			
	Income share (per cent)	Mean annual income (\$)	Income share (per cent)	Mean annual income (\$)	Income share (per cent)		Mean annual income (\$)	
					1978-79	1981-82	1978-79	1981-82
Lowest . . . . .	1.8	2,500	0.4	300	0.5	0.5	390	600
2nd . . . . .	3.0	4,300	1.3	900	2.2	2.4	1,610	2,600
3rd . . . . .	4.7	6,700	3.6	2,400	3.6	3.6	2,680	3,800
4th . . . . .	6.9	9,700	5.3	3,500	4.8	4.7	3,540	5,000
5th . . . . .	8.7	12,200	6.2	4,200	7.0	6.9	5,230	7,200
6th . . . . .	10.1	14,200	8.0	5,400	9.8	9.5	7,300	10,000
7th . . . . .	11.5	16,200	11.0	7,400	12.2	12.0	9,080	12,600
8th . . . . .	13.3	18,700	14.9	10,000	14.5	14.5	10,790	15,100
9th . . . . .	15.7	22,100	19.2	12,900	17.7	17.8	13,190	18,700
Highest . . . . .	24.4	34,300	30.1	20,300	27.8	28.1	20,700	29,400
Median annual income (\$)		13,200		4,600			6,300	8,500
Mean annual income (\$)		14,100		6,700			7,500	10,500
Numbers ('000)		5,066.4		4,858.6			9,590.4	9,925.1

**ALL INCOME UNITS: DECILE CLASSES, TYPE OF INCOME UNIT, INCOME SHARE AND MEAN  
ANNUAL INCOME, AUSTRALIA 1978-79 AND 1981-82**

Decile class	Married couple income units				One parent income units		One person income units		All income units			
	With no dependent children		With dependent children		Income share (per cent)	Mean annual income (\$)	Income share (per cent)	Mean annual income (\$)	1981-82		1978-79	
	Income share (per cent)	Mean annual income (\$)	Income share (per cent)	Mean annual income (\$)					Income share (per cent)	Mean annual income (\$)	Income share (per cent)	Mean annual income (\$)
Lowest . . . . .	2.6	5,000	2.8	6,500	2.6	2,300	2.0	1,900	1.7	2,700	1.7	2,000
2nd . . . . .	3.6	6,800	5.3	12,100	4.8	4,300	3.9	3,700	2.9	4,500	2.9	3,300
3rd . . . . .	4.3	8,100	6.6	15,000	5.7	5,100	4.4	4,200	4.2	6,500	4.2	4,800
4th . . . . .	5.7	10,800	7.6	17,400	6.2	5,500	5.3	5,100	5.6	8,700	5.8	6,600
5th . . . . .	7.6	14,300	8.6	19,600	6.9	6,100	7.2	6,800	7.4	11,500	7.6	8,600
6th . . . . .	9.5	17,900	9.6	21,900	7.9	7,000	9.4	8,900	9.2	14,200	9.3	10,500
7th . . . . .	11.5	21,700	10.8	24,800	10.0	8,900	11.7	11,100	11.2	17,300	11.3	12,700
8th . . . . .	13.8	26,000	12.3	28,200	13.0	11,600	13.9	13,200	13.6	21,100	13.8	15,600
9th . . . . .	16.5	31,100	14.5	33,300	17.0	15,200	16.7	15,900	17.2	26,600	17.0	19,300
Highest . . . . .	25.0	47,200	22.0	50,500	25.8	22,900	25.4	24,200	27.0	41,700	26.4	29,800
Median annual income (\$)		16,000		20,700		6,500		7,800		12,900		9,600
Mean annual income (\$)		18,900		22,900		8,900		9,500		15,500		11,300
Numbers ('000)		1,439.8		1,956.1		275.2		2,962.2		6,633.4		6,325.9

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## CHAPTER 10

### HEALTH

This chapter is primarily concerned with the activities of the Commonwealth relating to health. There is, however, government responsibility for health at the State and local levels. There are constitutional limits on the Commonwealth Government's role in the health care field, and the primary responsibility for planning and provision of health services is with the State and Territory Governments.

At the national level, health services in Australia are controlled by the Commonwealth Government. The Government appoints a Minister for Health, who exercises political control over the Commonwealth Department of Health, headed by the Director-General. The Commonwealth Government is primarily concerned with the formation of broad national policies, and influences policy making in health services through its financial arrangements with the State and Territory Governments, through the provision of benefits and grants to organisations and individuals, and through the regulation of health insurance.

The direct provision of health services, broadly speaking, is the responsibility of the State Governments. Each of the States and the Northern Territory has a Minister of Health who is responsible to the government of his particular State or Territory for the administration of its health authorities. In some States, the responsibility for health services is shared by several authorities whilst in others, one authority is responsible for all these functions.

Health care is also delivered by local government, semi-voluntary agencies, and profit making non-governmental organisations.

#### *ACT Health Authority*

In addition to its national responsibilities, the Commonwealth Government, through the ACT Health Authority, has special responsibility for health services in the Australian Capital Territory. The Authority, which is primarily funded through Commonwealth appropriations, has the statutory role of providing and monitoring health services in the A.C.T.

Health services provided by the Authority include:

- Hospital services.

The Authority operates Royal Canberra and Woden Valley Hospitals within the A.C.T. public hospital system. These hospitals offer an extensive range of general and speciality medical services. Calvary Hospital and the Queen Elizabeth II Home for Mothers and Babies are funded through the Authority's grant-in-aid program, and function within the public hospital system.

- Community services.

The Authority is responsible for health care delivery in the community, including health centres (eleven as at 30 June 1985), child health clinics and home nursing services. Other community health services provided by the Authority include ambulance services, health education, school dental and speech therapy services, and health and pharmaceutical inspection services. The Authority also provides a range of programs to service the mental health needs of the community, and the special health needs of other groups in the community such as the elderly, the physically handicapped, the intellectually handicapped and those with alcohol or drug dependence.

At 30 June 1985, the Authority had a staff of 3,784 full-time and 983 part-time employees.

Further information about the operations of the Authority and the services it provides is contained in Authority annual reports.

## COMMONWEALTH HEALTH BENEFITS AND ASSISTANCE

### **Medicare**

Details of the health financing arrangements under the Medicare program introduced by the Commonwealth Government in February 1984 are available in Year Book 68—1984.

Since the introduction of the Medicare program the income thresholds on which the levy is payable have been revised. From 1 July 1985 no levy was payable by single people earning

\$7,526 per annum or less, or by married couples and sole parents with a combined income of \$12,504 per annum or less, with a further \$1,530 per annum allowed for each dependent child.

"Shading-in" arrangements apply in respect of persons with taxable incomes marginally above the threshold.

### **Medicare Benefits**

The Health Insurance Act provides for a Medicare Benefits Schedule which lists medical services and the Schedule (standard) fee applicable in each State in respect of each medical service. The Schedule covers services attracting Medicare Benefits rendered by legally qualified medical practitioners, certain prescribed services rendered by approved dentists and optometrical consultations by participating optometrists. Schedule fees are set and updated by an independent fees tribunal which is appointed by the Government. The fees so determined are to apply for Medicare benefits purposes. Medical services in Australia are generally delivered by either private medical practitioners on a fee-for-service basis, or medical practitioners employed in hospitals.

Where a medical service is provided by a private medical practitioner on a fee-for-service basis, Medicare refunds 85 per cent of the Medicare Benefits Schedule fee cost or, the Schedule fee less \$10, whichever is the greater. It is not possible to insure with private health insurance organisations to cover the 15 per cent 'gap'. However, should an individual accumulate 'gap' payments in excess of \$150 per year, Medicare will pay benefits at 100 per cent of the Schedule fee.

Under Medicare, medical practitioners are able to direct bill for any patient. In such cases, they receive the Medicare benefit as full payment. Previously, direct billing was limited to services rendered to eligible Pensioner Health Benefit and Health Care Cardholders, and their dependants.

### **Hospital Care**

From 1 February 1984, basic public hospital services have been provided free of charge. Under Medicare, out-patient treatment and inpatient accommodation and care in a shared ward by a doctor employed by a hospital are provided free of charge. The scheme does not cover hospital charges for private accommodation in a public hospital, private hospital treatment, nor care in a public hospital by a doctor of the patient's choice. It is possible however for persons to take out insurance with registered health benefits organisations to cover these situations and medical benefits are available for private medical practitioners charges.

Patients who are accommodated in either private or public hospitals for continuous periods in excess of 45 days and who are, in essence, nursing home type patients, are required to make a non-insurable patient contribution in the same way that a patient in a nursing home does. For a private patient in a public hospital, health benefits paid by registered benefits organisations are reduced to the level of the standard nursing home benefit. In a private hospital, the benefits are reduced to \$80 a day, less the amount of the patient contribution.

Where a patient's doctor considers that a patient has continuing need for acute hospital care, the doctor may issue a certificate under section 3B of the Health Insurance Act to that effect, and the nursing home type patient arrangements do not apply. The new arrangements provide for a review mechanism in the form of the Acute Care Advisory Committee which, when requested (e.g. by a private health fund) to do so, may review such certificates and recommend that they be varied or revoked.

### **Private Hospitals**

Since 1 February 1984 both the Commonwealth bed day subsidy and the hospital insurance benefit for private hospital accommodation have been paid according to a system of classification consisting of three categories. Current levels of daily benefit and subsidy payments are:

- Category 1 hospitals receive a \$135 basic private fund benefit and a \$40 Commonwealth subsidy;
- Category 2 hospitals receive a \$115 basic private fund benefit and a \$30 Commonwealth subsidy; and
- Category 3 hospitals receive a \$95 basic private fund benefit and a \$20 Commonwealth subsidy.



The three categories of private hospitals are determined according to the services and facilities provided. Those hospitals with more sophisticated services and facilities attract a higher level of insurance benefit and Commonwealth bed day subsidy.

Commonwealth payments under this program increased from \$86.5m in 1982-83 to \$133m in 1984-85, reflecting the increased commitment in the first full financial year under Medicare.

The States have the primary responsibility for the arrangement and provision of health services within their respective States. In recognition of this, the relevant Commonwealth legislation requires the Commonwealth Minister for Health to consult with his counterparts in the States and have regard to their views in respect of the major issues affecting private hospitals, such as approvals to build or extend, categorisation criteria, determination of the initial category of individual hospitals and proposals to change the categories determined for individual hospitals. However, the existing overlapping of responsibilities between the Commonwealth and the States in the private hospital sector will be eliminated as a result of moves by the Commonwealth to deregulate its controls over approvals and categorisation of private hospitals, which forms the basis for payment of the Commonwealth bed day subsidy. Despite deregulation, the Commonwealth will continue its subsidisation of the private hospital sector.

### **Commonwealth Nursing Home Benefits**

There are two forms of Commonwealth benefit payable in respect of patients accommodated in premises approved as nursing homes under the National Health Act. These benefits are as follows:

(a) **Basic Nursing Home Benefit**

The Commonwealth pays basic nursing home benefits in respect of all qualified nursing home patients other than those who are entitled to damages or compensation. Basic benefit levels are reviewed and adjusted annually in each State to a level whereby the fees charged in respect of 70 per cent of beds in non-Government nursing homes, approved under the National Health Act, (i.e. participating nursing homes) are covered by the sum of the benefit plus statutory minimum patient contribution (explained below). As at 1 November 1984, the maximum amount of basic nursing home benefit payable per day in each State and Territory was: New South Wales and Australian Capital Territory \$33.35; Victoria \$48.50; Queensland \$28.10; South Australia and Northern Territory \$39.05; Western Australia \$27.55 (increased to \$31.55 from December 1984); and Tasmania \$27.80.

(b) **Commonwealth Extensive Care Benefit**

The Commonwealth extensive care benefit is payable at the rate of \$6 a day, in addition to the Commonwealth basic benefit, in respect of patients who need and receive 'extensive care' as defined in the National Health Act. Application must be made for payment of the extensive care benefit. As in the case of the Commonwealth basic benefit, the extensive care benefit is only payable in respect of qualified patients who are not entitled to damages or compensation.

**Minimum Patient Contribution**

All participating nursing home patients are normally required to make a statutory minimum contribution towards the cost of their accommodation in the nursing home. Patients are required to make this contribution towards the cost of their accommodation and care in recognition of those costs which would otherwise be incurred outside the nursing home in any alternative long-term residence.

The statutory minimum patient contribution at 13 June 1985 was \$13.65 a day, which is equivalent to 87.5 percent of the standard rate pension plus supplementary assistance. Where the fees charged by a participating nursing home are in excess of the combined total of nursing home benefits plus the statutory minimum patient contribution, the difference must be met by the patient. Conversely, where the nursing home fee is less than this combined total, the basic benefit paid by the Commonwealth is reduced by that amount.

Fees charged to patients in Government nursing homes are determined by State Governments. Patients in these homes also attract basic and extensive benefits from the Commonwealth Government, and the patient contribution is usually about the same as the statutory minimum patient contribution described above.

### Deficit Financing Arrangements

As an alternative to the provision of Commonwealth nursing home benefits under the National Health Act (as outlined above), the *Nursing Homes Assistance Act 1974* provides for direct funding of nursing homes conducted by local government and charitable and benevolent organisations.

Under the deficit financing arrangements the Commonwealth meets the approved operating deficits and the cost of approved asset replacements of these nursing homes. From December 1984, responsibility for this program was transferred from the Commonwealth Department of Health, to the Department of Community Services.

Nursing homes wishing to participate in the deficit financing arrangements must enter into a formal agreement with the Commonwealth Government for that purpose. Patients in deficit-financed nursing homes are required to pay a prescribed fee equivalent to the statutory minimum patient contribution, although provision exists to reduce this contribution in appropriate cases such as homes caring for children. Higher fees are prescribed for patients entitled to damages or compensation.

APPROVED NURSING HOMES AND BEDS—STATES AND TERRITORIES, 30 JUNE 1985

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved nursing homes—									
Deficit financed(a) . . . . .	139	80	72	61	28	28	1	—	409
Government(b) . . . . .	32	79	22	5	25	5	1	2	171
Other(c) . . . . .	350	239	114	96	71	18	2	2	892
<b>Total . . . . .</b>	<b>521</b>	<b>398</b>	<b>208</b>	<b>162</b>	<b>124</b>	<b>51</b>	<b>4</b>	<b>4</b>	<b>1472</b>
Beds in—									
Deficit financed nursing homes . . . . .	6,875	3,069	3,718	2,855	1,230	904	55	—	18,706
Government nursing homes . . . . .	3,354	4,914	2,429	1,141	1,814	840	24	254	14,770
Other nursing homes . . . . .	19,474	7,989	6,041	3,546	3,613	629	50	166	41,508
<b>Total . . . . .</b>	<b>29,703</b>	<b>15,972</b>	<b>12,188</b>	<b>7,542</b>	<b>6,657</b>	<b>2,373</b>	<b>129</b>	<b>420</b>	<b>74,984</b>
<i>Beds per 1000 population</i> . . . . .	<i>5.5</i>	<i>3.9</i>	<i>4.9</i>	<i>5.6</i>	<i>4.8</i>	<i>5.4</i>	<i>0.9</i>	<i>1.7</i>	<i>4.8</i>

(a) Deficit financed homes approved under the Nursing Homes Assistance Act for the payment of their approved operating deficits. (b) Government homes approved under the National Health Act for the payment of nursing home benefits. (c) Private profit and voluntary non-profit homes approved under the National Health Act for the payment of nursing home benefits.

Source: Commonwealth Department of Community Services.

### Other Commonwealth Benefits Schemes

#### Domiciliary Nursing Care Benefit

The Commonwealth Government provides a Domiciliary Nursing Care Benefit to assist people who choose to care, in their own homes, for chronically ill or infirm relatives who would require admission to a nursing home if this care in their own home was not available. Patients who qualify for this Benefit are, typically, those people who are incapable of caring for themselves and of being left unsupervised for any significant period.

The basic criteria for the payment of the Benefit are that the patient must be aged 16 years or over and be in need of and in receipt of continuing care, and also be receiving regular visits by a registered nurse. The Benefit is payable at the rate of \$42 per fortnight.

#### Home Nursing Subsidy Scheme

Commonwealth subsidies to home nursing organisations provided under the *Home Nursing Subsidies Act 1956* will be incorporated into a new joint Commonwealth/State Home and Community Care Program, announced during 1984. Information about this program is contained in Chapter 9, Social Security and Welfare.

#### Assistance to Isolated Patients

The *Isolated Patients Travel and Accommodation Assistance Scheme*, which is wholly funded by the Commonwealth Government, provides partial financial assistance to residents of isolated areas required to travel in excess of 200 kilometres to obtain medical treatment from the nearest suitable specialist medical practitioner. Benefits are also available for journeys associated with certain medical services provided in hospitals by oral surgeons and in respect of orthodontic and associated dental care to cleft lip and palate patients under 22 years of age. In 1984–85 Government expenditure on the Scheme totalled \$13.38m assisting some 130,000 people. An amount of \$15.5m has been allocated for 1985–6.

### Tuberculosis

The Australian Health Ministers' Conference in March 1985 recommended that the National Tuberculosis Advisory Council be abolished. Subsequently, tuberculosis matters have been dealt with through the Communicable Diseases Committee of the National Health and Medical Research Council.

The system of separate allowances payable to tuberculosis sufferers is being phased out. From 1 November 1984 new sufferers from tuberculosis have been treated in the same way as sufferers from any other illness and have been extended sickness benefits, provided they meet the eligibility criteria for those benefits. However, continuing sufferers from the disease who had already been granted tuberculosis allowances have continued to receive the allowance which was frozen at the October 1984 rate.

### Pharmaceutical Benefits Scheme

Under the Pharmaceutical Benefits Scheme, assistance is provided towards the cost of a comprehensive range of drugs and medicines to persons receiving treatment from a medical practitioner. From 1 April 1979, the Scheme was expanded to allow dentists, who are approved as participating dental practitioners, to prescribe a limited range of drugs for dental treatment of their patients. The drugs and medicines are supplied by an approved chemist upon presentation of a prescription from the patient's medical or dental practitioner, or by an approved hospital to patients receiving treatment at the hospital.

From 1 January 1983 patient contribution arrangements were as follows:

- *free of charge*—pensioners with Pensioner Health Benefits cards and their dependants receive benefit items free of charge;
- *\$2 per benefit item*—people in special need who hold Health Care cards and their dependants, and those Social Security pensioners and Veterans' Affairs service pensioners who do not hold a PHB card and their dependants, pay a contribution of \$2 per benefit item;
- *\$4 per benefit item*—all other people pay a contribution of \$4 per benefit item. This has been increased to \$5 with effect from 1 July 1985.

Under the Pharmaceutical Benefit Scheme the total cost, including patient contribution of prescriptions processed for payment was \$649.6 million in 1983-84 and \$763.3 million in 1984-85. These figures do not include benefits supplied by certain hospitals and miscellaneous services or retrospective adjustments of chemists' remunerations.

#### BENEFIT PRESCRIPTIONS AND COST OF MORE FREQUENTLY PRESCRIBED DRUG GROUPS, AUSTRALIA, 1984-85

Drug group	Benefit prescriptions		Total cost of benefit prescriptions(a)	
	Number	Percentage of total	Amount	Percentage of total
	'000	%	'000	%
Analgesics . . . . .	15,383.1	12.7	92,913.9	12.2
Heart—Drugs acting on . . . . .	9,393.7	7.8	83,979.9	11.0
Diuretics . . . . .	9,364.1	7.8	46,727.0	6.1
Penicillins . . . . .	8,554.1	7.0	52,094.7	6.8
Bronchial spasms—Preparations for . . . . .	7,917.4	6.6	52,571.3	6.9
Anovulants . . . . .	5,755.8	4.8	28,894.3	3.8
Blood vessels—Drugs acting on . . . . .	4,846.7	4.0	45,801.7	6.0
Tranquillisers . . . . .	4,788.7	4.0	21,932.2	2.9
Tetracyclines . . . . .	4,276.3	3.5	26,898.2	3.5
Sulphonamides . . . . .	4,171.1	3.5	22,565.5	3.0
Antidepressants . . . . .	3,826.3	3.2	18,940.0	2.5
Eye drops . . . . .	3,351.9	2.8	18,670.3	2.5
Hypnotics and sedatives . . . . .	2,851.6	2.4	11,007.0	1.4
Skin sedative applications . . . . .	2,583.1	2.1	11,572.4	1.5
Erythromycin . . . . .	2,526.8	2.1	14,781.8	1.9
Antacids . . . . .	2,524.5	2.1	11,713.7	1.5
Water and electrolyte replacement . . . . .	2,475.2	2.1	14,282.1	1.9
Other drug groups . . . . .	26,238.4	21.7	187,924.7	24.6
<b>Total</b> . . . . .	<b>120,828.9</b>	<b>100.0</b>	<b>763,270.7</b>	<b>100.0</b>

(a) Includes patients' contributions. Excludes Government expenditure on pharmaceutical benefits provided through miscellaneous services.

Source: Commonwealth Department of Health.

### Program of Aids for Disabled People

The principal aim of the Program of Aids for Disabled People (PADP) is to enable people with disabilities of a permanent or indefinite duration to live more independently in a domestic situation, with a consequent reduction in demand for more costly institutional care. Under the program, certain aids to daily living including wheelchairs, surgical shoes, braces, splints, calipers, surgical wigs, aids for incontinence, walking aids, and basic home modifications (ramps, hand rails, door widenings, etc.) may be provided to eligible people. PADP, which is wholly funded by the Commonwealth, is operated through health services networks administered by the State and Territory health authorities which are responsible for the day to day operation of the Program, including the purchase and issue of aids.

### Summary of personal benefit payments

For an analysis by purpose and economic type of expenditure by all Commonwealth Government authorities see Chapter 22, Public Finance.

Most Commonwealth Government health benefits are financed through the National Welfare Fund and the Health Insurance Commission. The following table shows personal benefit payments by Commonwealth Authorities for 1983-84.

COMMONWEALTH AUTHORITIES: PERSONAL BENEFIT PAYMENTS—HEALTH 1983-84 (\$'000)

	<i>N.S.W.</i> (a)	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i> (a)	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
Hospital and other institutional services and benefits—							
General hospitals . . . . .	112,531	79,718	61,930	56,678	27,503	13,299	351,659
Nursing homes . . . . .	225,871	188,456	72,191	53,819	44,864	12,169	597,370
Hospital benefits, hospital and other institutional services n.e.c. . . . .	12,179	9,900	4,800	-2,300	-2,700	-1,700	20,179
<i>Total</i> . . . . .	<i>350,581</i>	<i>278,074</i>	<i>138,921</i>	<i>108,197</i>	<i>69,667</i>	<i>23,768</i>	<i>969,208</i>
Clinic and other non-institutional services and benefits . . . . .	569,881	379,058	162,244	131,495	111,754	38,249	1,392,681
Public health . . . . .	2,358	419	3,505	2,656	2,398	458	11,794
Pharmaceutical, medical aids and appliances . . . . .	193,669	124,238	81,117	42,263	35,673	12,623	489,583
<b>Total health</b> . . . . .	<b>1,116,489</b>	<b>781,789</b>	<b>385,787</b>	<b>284,611</b>	<b>219,492</b>	<b>75,098</b>	<b>2,863,266</b>

(a) State totals for New South Wales and South Australia include expenditure on personal benefit payments to residents in the Australian Capital Territory and the Northern Territory respectively.

### Commonwealth Government subsidies and grants to States

#### General Revenue Grants

The Commonwealth provides untied identifiable health grants within general financial assistance grants to the States and the Northern Territory as a contribution towards the cost of health programs. These arrangements, which are authorised by the States (Tax Sharing and Health Grants) Act 1981, are designed to replace previous specific purpose health payments for public hospital operating costs (under expired Hospital Cost Sharing Agreements), community health and school dental service programs and apply fully to all States.

#### Medicare Grants to the States

Under the Medicare program, all States (including South Australia and Tasmania), the Northern Territory and the Australian Capital Territory, have been compensated by Medicare grants outside the identified health grants and financial assistance arrangements for:

- revenue losses and additional medical costs directly attributable to the provision of free public hospital accommodation and treatment; and
- a reduction to \$80 per day in the fee charged for those persons who seek 'doctor of choice' or private ward accommodation in public hospitals.

As part of the Medicare arrangements the hospital cost sharing arrangements between the Commonwealth and South Australia and Tasmania terminated on 1 February 1984 and have been funded thereafter on the same basis as other States.

The Medicare grants to the States and Northern Territory also include an additional community health component to restore the level of Community Health Grants to 1975-76 levels in real terms.

Under the Medicare arrangements, Queensland also received an additional special public hospital payment of \$15m in 1983-84 and \$35m in 1984-85.

### **Paramedical services**

Commonwealth funding to participating States under the *States Grants (Paramedical Services) Act 1969* is to be incorporated in the Home and Community Care Program: see Chapter 9, Social Security and Welfare.

## **Commonwealth Government subsidies and grants to organisations**

### **Health Program Grants**

Health Program Grants are authorised under Part IV of the Health Insurance Act. The scheme involves payments to approved organisations in respect of the costs incurred by those organisations in providing approved health services. The grants were first introduced in 1975 with the intention of establishing a scheme for funding a wide range of health services on other than a fee-for-service basis. The scheme underwent several modifications in later years to allow for the provision of charges to be imposed, where appropriate, for services rendered to privately insured patients.

Since 1 February 1984, there has been a return to the original concept of health program grants in that they now cover the entire costs incurred by the organisations in respect of the approved health services, and no charges are raised for those services.

Funds appropriated for these grants amounted to \$6.094m in 1983-84; \$7.162m in 1984-85; and \$8.086m in 1985-86.

### **National Community Health Program**

Under the National Community Health Program, the Commonwealth provides funding to organisations in respect of specific activity which has been approved for the purpose of the Program.

The largest of these projects is the Family Medicine Program (FMP) of the Royal Australian College of General Practitioners, which provides vocational training for young doctors who intend to enter general practice. The trainees receive their training through attachments to participating private general practitioner practices and by attendance at educational events organised by the FMP.

The other national projects are either national co-ordinating secretariats of voluntary non-profit organisations operating in more than one State or specific health-related projects which have national application.

Funds appropriated for this program amounted to \$9.155m in 1983-84; \$11.00m in 1984-85; and \$11.835m in 1985-86.

### **Medicare Grants for Community Health**

The Commonwealth Government has a renewed interest in community health services. The Medicare agreements, which commenced on 1 February 1984, were used as vehicles for delivering additional Commonwealth funds to the States and Territories in block grants for new or expanded services within their borders. These grants amounted to \$7.3m in 1983-84; \$17.968m in 1984-85; and \$19.263m in 1985-86.

### **Other Grants and Subsidies**

The Commonwealth Government gives financial assistance to certain organisations concerned with public health. Examples of organisations included in this category are:

The *Royal Flying Doctor Service* is a non-profit organisation providing medical services in remote areas of Australia. It is distinct from, but co-ordinates with, the Aerial Medical Service which, while formerly operated by the Commonwealth Department of Health, has been operated by the Northern Territory Government since 1 January 1979. The Royal Flying Doctor Service is financed mostly from donations and government contributions. For the year ended 30 June 1985 the Commonwealth Government paid grants totalling \$5,650,000 towards operational costs and assistance of \$3,497,000 towards an approved program of capital expenditure.

The *Red Cross Blood Transfusion Service* is conducted by the Australian Red Cross Society throughout Australia. The operating costs of the Service in the States and the Northern Territory are met by the State Governments and the Northern Territory Government paying 60 per cent, the Society 5 per cent of net operating cost or 10 per cent of donations, whichever is the lesser, and the Commonwealth Government meeting the balance. Approved capital expenditure by the Service is shared on a \$1 per \$1 basis with the States

and the Northern Territory Government. Commonwealth Government expenditure for each State and the Northern Territory during 1984-85 was \$13,593,500, made up as follows: New South Wales, \$3,563,800; Victoria, \$3,607,800; Queensland, \$2,970,300; South Australia, \$1,429,600; Western Australia, \$1,356,900; Tasmania, \$231,700; and Northern Territory, \$433,400.

The *National Heart Foundation of Australia* is a voluntary organisation, supported almost entirely by public donations, established with the objective of reducing the toll of heart disease in Australia. It approaches this objective by programs sponsoring research in cardiovascular disease, community and professional education directed to prevention, treatment and rehabilitation of heart disease and community service programs including rehabilitation of heart patients, risk assessment clinics and surveys and documentation of various aspects of heart disease and treatment of heart disease in Australia. The Foundation's income in 1984 was \$8,536,109 of which \$7,238,729 was from public donations and bequests. Federal, State and Semi-Government authorities made grants of \$94,718 for specific projects conducted by the Foundation. Since the inception of the Foundation research has been a major function and a total of \$20,555,000 has been expended in grants to university departments, hospitals and research institutes and for fellowships tenable in Australia and overseas. It is notable however that with increasing opportunities for prevention and control of heart disease, the Foundation's education and community service activities are increasing significantly. In 1984 the expenditure on research was \$2,222,768 while expenditure on education and community service was \$2,144,458.

The *World Health Organization* (WHO) is a specialised agency of the United Nations having as the objective the attainment by all peoples of the highest level of health. Australia is assigned to the Western Pacific Region, the headquarters of which is at Manila, and is represented annually at both the World Health Assembly in Geneva and the Regional Committee Meeting in Manila. Australia's contribution to WHO for 1984-85 was \$4,704,758.

The *International Agency for Research on Cancer* (IARC) was established in 1965 within the framework of the World Health Organization. The headquarters of the Agency are located in Lyon, France. The objectives and functions of the Agency are to provide for planning, promoting and developing research in all phases of the causation, treatment and prevention of cancer. Australia's contribution to the IARC for 1984-85 was \$563,257.

## **National Health Services and Advisory Organisations**

### **The Australian Health Services Council**

A national council, the Australian Health Services Council, together with bilateral Commonwealth/State Health Committees, was established under the Medicare Agreements between the Commonwealth and the States.

The Council and the Committees report to the respective Health Ministers and provide advice on policy and administrative and financial arrangements. The Council and the Committees endeavour to apply principles aimed at achieving operating economies in recognised hospitals and central services consistent with maintaining or achieving an acceptably high standard of health care.

The Health Committees also consider adjustments to Commonwealth and State health programs that may be in the mutual interests of the Commonwealth and the States.

### **Health Services Organisations**

The *Commonwealth Department of Health Pathology Laboratory Service* provides clinical diagnostic and investigational facilities at laboratories situated in Albury, Bendigo, Cairns, Hobart, Launceston, Lismore, Port Pirie, Rockhampton, Tamworth, Toowoomba and Townsville. Their primary role is to assist medical practitioners in the diagnosis of illness and disease and to provide facilities for investigations into public health and aspects of preventive medicine. During 1984-85, these laboratories carried out approximately 7.0 million examinations, tests and investigations in respect of 0.8 million patient requests.

The *Commonwealth Serum Laboratories Commission* (CSL) produces pharmaceutical products for human and veterinary use and is one of Australia's foremost scientific institutes. The Commission's main function is to produce and sell prescribed pharmaceutical products used for therapeutic purposes and to ensure the supply of essential pharmaceutical products in accordance with national health needs. The Commission's functions also include research and development relating to many kinds of human and veterinary diseases covering the fields of bacteriology, biochemistry, immunology and virology. The Commission's laboratories and

central administration are located at Parkville, Victoria, with storage and distribution facilities in all States.

For over sixty years, CSL has been Australia's chief supplier of biological medicines, insulins, vaccines, human blood fractions, *Bacillus Calmette-Guerin* (BCG) and an increasing range of veterinary pharmaceutical products needed by Australia's sheep, cattle, pig and poultry industries. The CSL Act now allows CSL to produce, buy, import, supply, sell or export prescribed pharmaceutical products (either of a biological or non-biological nature).

The *Australian Radiation Laboratory* is concerned with the development of national policy relating to radiation health. The Laboratory

- undertakes research and development in the fields of ionising and non-ionising radiations which have implications for public and occupational health;
- formulates policy by developing codes of practice and by undertaking other regulatory, compliance, surveillance and advisory responsibilities at the national level with respect to public and occupational health aspects of radiation; and
- maintains national standards of radiation exposure and radioactivity.

The *National Acoustic Laboratories* undertake scientific investigations into hearing and problems associated with noise as it affects individuals, and advise Commonwealth Government Departments and instrumentalities on hearing conservation and the reduction of noise. A free audiological service is provided for pensioners with medical benefit entitlements and their dependants, persons under 21, war widows, Social Security rehabilitees and Veterans' Affairs patients. During 1984-85 the number of appointments provided was 171,260 and the number of hearing aids fitted was 62,477.

The *Ultrasonic Institute* conducts research and provides advisory services on the use of ultrasonic radiation in the diagnosis and treatment of disease. The Institute is recognised as a world leader in its field.

### **Commonwealth Government health advisory organisations**

The *National Health and Medical Research Council* advises the Commonwealth Government and State Governments on matters of public health administration and the development of standards for food, pesticides, agricultural chemicals, water and air for consideration by the states for inclusion in their legislation. It also advises the Commonwealth Government and State Governments on matters concerning the health of the public and on the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition. The Council advises the Commonwealth Minister for Health on medical research and on the application of funds from the Medical Research Endowment Fund which provides assistance to Commonwealth Government Departments, State Departments, universities, institutions and persons for the purposes of medical research and for the training of persons in medical research. The Commonwealth Government makes annual appropriations to the fund. Expenditure for 1984-85 was \$44.182 million. The secretariat for the Council and its Committees is provided by the Commonwealth Department of Health and is located in Canberra.

The *Australian Institute of Health* is a semi-autonomous body established by Federal Cabinet in 1984. It reports to the Minister for Health through the Secretary of the Commonwealth Department of Health. The Institute comprises two Canberra based research units and the School of Public Health and Tropical Medicine (formerly the Commonwealth Institute of Health), located at Sydney University. The Institute aims to contribute to improvements in the nation's health by focusing on the health of individuals and communities and its determinants including the provision and use of health services.

The Australian Institute of Health has as one of its primary responsibilities the improvement of the national health data base. This will include developing a national death index, national cancer statistics clearing house, a National Nosology Reference Centre and national Aboriginal health statistics. Research will be undertaken into the provision and use of health services; a number of data bases relating to the cost and use of hospitals, nursing homes, pharmaceuticals and medical services will be developed. The Institute also has assumed responsibility for the administration of the Health Services Research and Development Grants Program, now to be known as the Australian Institute of Health Grants Program and of the Research Into Drug Abuse Program.

In 1984-85, the School of Public Health and Tropical Medicine continued to offer courses leading to the Master of Public Health degree and the Diploma in Tropical Public Health through the University of Sydney.

Research has continued into the socio-cultural aspects of the health and health care of Aboriginals and other projects include studies into the health status of the urban poor, homeless men and the young unemployed. One of the major research activities in the past year has been the development of analyses of chronic illness based on Diagnosis Related Groupings (DRGs) which have implications for the future planning and evaluation of health services. As well the School continues to conduct clinically based research into malaria, nosocomial infections, AIDS and leprosy, and has been closely involved in monitoring mosquito vectors of arboviruses and of dengue in New South Wales.

The School is also closely involved in the fields of health education and health promotion (NSW Quit-for-Life Campaign and AIDS counselling among others); developing guidelines and standards for community health services and on ethical and legislative regulation of new biomedical technologies; studies into the effectiveness of multiphasic health screening and into infectious disease prevention and control with particular reference to Hepatitis B and sexually transmitted diseases; scientific studies to develop recombinant DNA and advanced immunological techniques for screening groups at risk to communicable diseases and for vaccine production; studies related to chemical mutagens detected by the genetic toxicology group; the use of taxonomic, behavioural, cytogenetic and ecological techniques in the study of disease vectors, parasites and biological control agents; and developing a scientific basis for human nutrition.

*Therapeutic goods standards.* The Pharmaceuticals and Biological Laboratories Branches and the Medical Devices and Dental Products Branch of the Commonwealth Department of Health are responsible for the development of standards for therapeutic goods and for testing such products for compliance with standards to ensure that they are safe, pure, potent and efficacious. Other responsibilities include the inspection of manufacturing premises, the evaluation of new and modified products and the investigation of complaints.

The British Pharmacopoeia is the primary source of standards under the Therapeutic Goods Act. In addition, the Minister has powers to make orders specifying standards for general classes of goods and specific goods which are imported, the subject of interstate trade or supplied to the Commonwealth Government. Policy on standards for therapeutic goods is developed by the Therapeutic Goods Standards Committee, which is a statutory committee, and is implemented by the Laboratories Branch. The Therapeutic Goods Advisory Committee, which is also a statutory committee, advises the Minister on standards and their implementation.

The Therapeutic Goods Compliance Branch, jointly with State officials and the pharmaceutical industry, prepares and revises an Australian Code of Good Manufacturing Practice which is the criterion employed by inspectors for the licensing of pharmaceutical manufacturers.

The Laboratories Branch has Sections which deal with viral products, bacterial products, pharmaceutical products, antibiotics and pharmacology.

The *Australian Drug Evaluation Committee* makes medical and scientific evaluations both of such goods for therapeutic use as the Minister for Health refers to it for evaluation and of other goods for therapeutic use which, in the opinion of the Committee, should be so evaluated. It advises the Minister for Health as it considers necessary on matters relating to the importation into, and the distribution within, Australia of goods for therapeutic use that have been the subject of evaluation by the Committee. It has the powers to co-opt and seek advice from specialist medical colleges and associations and from the medical and allied professions, drug manufacturers and other sources. During 1984-85 fifty-four applications for approval to market new drugs and thirty-nine applications to extend the indications or amend dosage regimes for currently marketed drugs were considered by the Committee. Seventy-two applications were approved, sixteen rejected and five deferred pending production of further information on safety and efficacy. Under the Committee's control are the Australian Registry of Adverse Reactions to Drugs, which provides an early warning system based on reports of reactions to drugs forwarded voluntarily by medical practitioners, pharmacists, hospitals, etc.; the Adverse Drug Reaction Advisory Committee, which gives initial consideration to the adverse drug reaction reports received by the Registry and arranges feedback to the medical profession; the Vaccines Sub-committee; the Endocrinology Sub-committee; the Congenital Abnormalities Sub-committee; the Anti-cancer Drugs Sub-committee; the Radiopharmaceuticals Sub-committee; and the National Drug Information Advisory Sub-committee, formed to oversee administrative aspects of the technical input to the National Drug Information Service.



The *Therapeutic Goods Advisory Committee* considers, and advises the Minister for Health on, any matters relating to standards applicable to goods for therapeutic use and the administration of the Therapeutic Goods Act. The *Therapeutic Goods Standards Committee*, under the same Act, advises the Minister for Health on standards applicable to goods for therapeutic use and requirements relating to the labelling and packaging of any such goods.

The *National Therapeutic Goods Committee* comprises Federal and State representatives. Its function is to make recommendations to the Commonwealth and State Governments on action necessary to bring about co-ordination of legislation and administrative controls on therapeutic goods. Sub-committees have been formed to consider specific matters, notably advertising, establishment of a National Product Register, a Code of Good Manufacturing Practice, and standards for disinfectants.

The *Standing Committee of the Health Ministers' Conference* was established by the 1980 Australian Health Ministers' Conference to carry out any tasks or directions referred to it by the Conference. The Committee's membership consists of representatives from the Commonwealth Departments of Health and Veterans' Affairs, each State health authority, the Northern Territory Department of Health and the Australian Capital Territory Health Authority.

## COMMUNICABLE DISEASES

### Quarantine

The *Quarantine Act 1908* is administered jointly by the Commonwealth Departments of Health and Primary Industry and provides for the taking of measures to prevent the introduction or spread of diseases affecting humans, animals and plants.

#### Human quarantine

The masters of all ships and aircraft arriving in Australia from overseas are required to notify medical officers acting on behalf of the Commonwealth Department of Health of all cases of illness on board their vessel at the time of arrival. Passengers or crew members who are believed to be suffering from a quarantine illness may be examined by Quarantine Medical Officers located at all ports of entry.

The main concern of examining officers is the detection of quarantinable diseases including cholera, yellow fever, plague, typhus fever and viral haemorrhagic fevers. These diseases are not endemic to Australia and it is of great importance to prevent their entry. Sufferers or suspected sufferers may be isolated to prevent the possible spread of the disease.

A valid International Certificate of Vaccination is required of travellers to Australia over one year of age who have been in *yellow fever* infected areas within the past 6 days.

All passengers, whether they arrive by sea or air, are required to give their intended place of residence in Australia so that they may be traced if a case of disease occurs among the passengers on the ship or aircraft by which they travelled to Australia.

*Isolation.* Under the Quarantine Act, airline and shipping operators are responsible for the expenses of isolation of all travellers who disembark from their aircraft or ship and who fail to meet Australia's vaccination requirements.

#### Animal quarantine

The Department of Primary Industry, in consultation with the States and Australia's agricultural and livestock groups, seeks to satisfy the need for animal derived goods and to provide improved genetic material for Australia's livestock industries, while ensuring the maximum practical protection against the entry of exotic livestock diseases.

Importation of animals is restricted to certain species from designated overseas countries whose diseases status and pre-entry quarantine facilities meet Australia's stringent requirement. With few exceptions all imported animals are required to serve a period in quarantine on arrival.

Animal quarantine stations are located at most capital cities. A high security animal quarantine station on the Cocos (Keeling) Islands provides the means whereby the safe importation of a wide range of commercial livestock is facilitated.

Measures to prevent the entry of exotic diseases are also applied through the Northern Surveillance program and the rigorous screening of applications to import biological materials and animal products and through inspection and treatment procedures on arrival.

### Plant quarantine

Arising from both its dependence upon exotic plant species for agriculture, horticulture and forestry and its island continental isolation, Australia is free of numerous plant pests and diseases that occur elsewhere in the world. The importation into Australia of plant materials is subject to strict quarantine controls. Some materials are admitted only under certain conditions while others are prohibited altogether. The quarantines are designed to exclude from the country unwanted pests and plant diseases. It is not possible to predict how a new plant pest or disease will perform when introduced to a new environment free of its natural enemies. Hence the general objective is to keep out of the country any pest or disease which could cause serious economic losses to Australia's agriculture, horticulture or forests.

### Notifiable diseases

Although State and Territory health authorities are responsible for the prevention and control of infectious diseases within their areas of jurisdiction, certain powers and responsibility may be delegated to local authorities within each State. These usually involve such activities as personal health services, environmental sanitation and local communicable disease control.

The Commonwealth Department of Health receives notification figures from the States and Territories on a monthly basis which are published in *Communicable Diseases Intelligence*. The national totals for the year are published in the annual report of the Director-General of Health.

The following table shows, by State and Territory, the number of cases notified in 1984, for those diseases which are notifiable in all States and Territories. The table does not include diseases which are notifiable only in certain States or Territories. Factors such as the availability of medical and diagnostic services, varying degrees of attention to disease notification, and the enforcement and follow-up of notifications by health authorities, affect both the completeness and the comparability of the figures between States and from year to year.

NOTIFIABLE DISEASES(a), NUMBER OF CASES NOTIFIED 1984

Disease	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Amoebiasis . . . . .	13	—	4	20	7	—	1	1	46
Ankylostomiasis . . . . .	2	—	5	66	2	—	—	—	75
Arbovirus infection . . . . .	805	161	472	136	2	—	—	1	1,577
Brucellosis . . . . .	5	1	7	—	1	—	1	—	15
Gonorrhoea . . . . .	2,685	1,533	1,518	726	1,434	42	827	129	8,894
Hepatitis A (infectious) . . . . .	131	140	252	68	38	10	22	13	674
Hepatitis B (serum) . . . . .	522	188	442	199	155	10	20	23	1,559
Hydatid disease . . . . .	5	—	1	—	1	—	—	2	9
Leprosy . . . . .	7	5	5	3	2	—	4	2	28
Leptospirosis . . . . .	46	36	118	14	8	5	—	—	227
Malaria . . . . .	113	66	330	54	34	9	15	19	640
Ornithosis . . . . .	—	7	2	22	10	—	—	1	42
Salmonella infections . . . . .	659	170	337	346	113	79	355	33	2,092
Shigella infections . . . . .	115	20	64	38	55	2	125	1	420
Syphilis . . . . .	1,489	174	358	127	204	2	952	17	3,323
Tetanus . . . . .	4	—	1	2	—	—	—	—	7
Tuberculosis (all forms) . . . . .	510	298	177	82	134	11	65	22	1,299
Typhoid fever . . . . .	28	7	12	—	2	—	—	1	50
Typhus (all forms) . . . . .	1	—	6	1	—	—	—	—	8

(a) There were no cases of anthrax, cholera, diphtheria, plague, poliomyelitis, smallpox or yellow fever.

## NOTIFIABLE DISEASES, NUMBER OF CASES NOTIFIED: AUSTRALIA, 1980 TO 1984

	1980	1981	1982	1983	1984
Amoebiasis . . . . .	53	62	33	57	46
Ankylostomiasis . . . . .	219	136	110	88	75
Anthrax . . . . .	2	—	—	—	—
Arbovirus infection . . . . .	18	17	221	33	1,577
Brucellosis . . . . .	49	36	28	16	15
Cholera . . . . .	3	2	1	4	—
Diphtheria . . . . .	1	18	2	1	—
Gonorrhoea . . . . .	11,487	11,197	12,805	10,646	8,894
Hepatitis A (infectious) . . . . .	1,385	1,453	1,046	991	674
Hepatitis B (serum) . . . . .	646	500	725	943	1,559
Hydatid disease . . . . .	41	24	12	10	9
Leprosy . . . . .	35	38	46	62	28
Leptospirosis . . . . .	64	95	135	242	227
Malaria . . . . .	541	408	548	570	640
Ornithosis . . . . .	17	13	14	19	42
Poliomyelitis . . . . .	1	—	—	—	—
Salmonella infections . . . . .	2,292	2,269	1,866	2,989	2,092
Shigella infections . . . . .	545	424	437	567	420
Syphilis . . . . .	2,902	2,916	3,211	3,556	3,323
Tetanus . . . . .	9	12	12	10	7
Tuberculosis (all forms) . . . . .	1,554	1,460	1,363	1,218	1,299
Typhoid fever . . . . .	19	26	15	22	50
Typhus (all forms) . . . . .	—	—	11	21	8

Source: Commonwealth Department of Health.

### Immunisation campaigns

Continuing immunisation programs against poliomyelitis, measles, mumps, rubella, diphtheria, tetanus, and whooping cough are maintained in all States and Territories. Mumps immunisation programs commenced late in 1982.

Mass campaigns for rubella immunisation are routinely undertaken only on girls aged between 10 and 14 years. Rubella immunisation is also available when appropriate to females during their reproductive years. Whooping cough immunisation is currently given only to infants less than 1 year of age.

## HOSPITALS

### Repatriation hospitals

The Department of Veterans' Affairs administers the only national hospital system in Australia, consisting of six acute-care Repatriation Hospitals (one in each State), three auxiliary hospitals, and the Anzac Hostel in Brighton, Victoria.

A full range of in-patient and out-patient services is available for the care and treatment of eligible Veterans and their dependants. Patients from the general community may also receive treatment at Repatriation hospitals provided bed capacity is available after the needs of entitled Veterans have been met and the hospital facilities are appropriate to the treatment required.

The Department of Veterans' Affairs has fostered the development of reciprocal treatment arrangements with State health authorities to avoid the unnecessary duplication of hospital facilities and services. All Repatriation General Hospitals (RGHs) are fully accredited by the Australian Council on Hospital Standards, each is affiliated with a university and learned college for the education of medical and allied health professional staff. Schools for nursing education are provided at the major RGHs.

Veterans may also receive treatment in non-departmental public and private hospitals and nursing homes at the Department's expense in certain circumstances. Entitled patients with psychiatric conditions requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Department in mental hospitals administered by State authorities.

Details of patients, staff and expenditure on Repatriation institutions and other medical services are given in Chapter 9, Social Security and Welfare.

### Hansenide hospitals

The two isolation hospitals in Australia for the care and treatment of persons suffering from Hansen's Disease (leprosy) are at Little Bay in New South Wales and Derby in Western Australia. In North Queensland, a leprosy annexe is attached to the Palm Island Hospital near Ingham and in the Northern Territory leprosy sufferers are treated and cared for at the East Arm Hospital in Darwin. Treatment is also provided at a number of other hospitals in Australia which do not have facilities set aside specifically for leprosy patients.

### Mental health institutions

The presentation of meaningful statistics of mental health services has become increasingly difficult because of changes in recent years in the institutions and services for the care of mental patients. The emphasis has shifted from institutions for care of patients certified insane to a range of mental health services provided for in-patients and out-patients at psychiatric hospitals, admission and reception centres, day hospitals, out-patient clinics, training centres, homes for the mentally retarded and geriatric patients, psychiatric units in general hospitals, and the like. Statistics relating to mental health institutions are available from relevant agencies in most States.

### Hospital statistics

A major factor in the cost of health care in Australia is hospital treatment of patients. Attempts to measure the number of in-patients treated and bed-days involved for each disease or injury have been going on for some years, but as coverage is incomplete it is not possible to present national statistics. Figures for New South Wales, Victoria, Queensland and South Australia however, are published in the ABS publications *Hospital and Nursing Home Inpatients* (4306.1), *Public Hospital Morbidity* (4301.2), *Hospital Morbidity* (4303.3) and *Hospital Morbidity* (4302.4) respectively.

The number of hospitals and beds in each State and Territory, as approved under the Health Insurance Act, is provided in the table below.

APPROVED HOSPITALS (a) AND BEDS, STATES AND TERRITORIES, 30 JUNE 1985

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved hospitals—									
Public/Recognised . . . . .	230	166	143	83	92	22	5	4	745
Private—									
Category 1 . . . . .	7	11	13	7	3	1	—	—	42
Category 2 . . . . .	65	54	20	15	16	4	—	1	175
Category 3 . . . . .	32	52	15	15	3	1	—	—	118
Total private . . . . .	104	117	48	37	22	6	—	1	335
<b>Total hospitals . . . . .</b>	<b>334</b>	<b>283</b>	<b>191</b>	<b>120</b>	<b>114</b>	<b>28</b>	<b>5</b>	<b>5</b>	<b>1,080</b>
Beds in—									
Public/Recognised . . . . .	25,436	15,360	13,139	6,529	6,453	2,116	740	1,044	70,817
Private—									
Category 1 . . . . .	1,215	2,213	2,080	1,033	704	142	—	—	7,387
Category 2 . . . . .	4,027	2,534	1,130	705	1,069	362	—	81	9,908
Category 3 . . . . .	1,020	1,204	703	428	62	12	—	—	3,429
Total private . . . . .	6,262	5,951	3,913	2,166	1,835	516	—	81	20,724
<b>Total hospitals . . . . .</b>	<b>31,698</b>	<b>21,311</b>	<b>17,052</b>	<b>8,695</b>	<b>8,288</b>	<b>2,632</b>	<b>740</b>	<b>1,125</b>	<b>91,541</b>
<i>Beds per 1,000 population</i>	<i>5.8</i>	<i>5.2</i>	<i>6.8</i>	<i>6.4</i>	<i>6.0</i>	<i>6.0</i>	<i>5.2</i>	<i>4.5</i>	<i>5.9</i>

(a) Includes Veterans' Affairs hospitals.

Source: Commonwealth Department of Health.

## DEATHS

Information relating to crude death rates and life expectancy is contained in Chapter 6, Demography (Vital Statistics).

## Causes of Death and Perinatal Deaths

Causes of death in Australia are classified according to the Ninth Revision of the International Classification of Diseases (ICD) produced by the World Health Organization (WHO). The statistics in the table below show the number of deaths registered during 1984, classified to broad groupings of causes of death. More detailed statistics are contained in *Causes of Death, Australia* (3303.0).

The major causes of death in the community in 1984 were diseases of the circulatory system (accounting for 49.4 per cent), neoplasms (23.8 per cent), diseases of the respiratory system (7.1 per cent) and accidents, poisonings and violence (6.6 per cent). Infectious diseases have caused few deaths in Australia in recent years, largely as a result of quarantine activities, immunisation campaigns and similar measures. In 1984, only 0.5 per cent of all deaths were due to such diseases.

The relative importance of groups of causes of death varies with age. Diseases of the circulatory system and neoplasms are predominant in middle and old age. Accidents, particularly those involving motor vehicles, are the primary cause of death in childhood and early adulthood. The majority of infant deaths (56 per cent in 1984) occur within 28 days after birth (see table on perinatal deaths). Nearly all of these neonatal deaths are due to congenital anomalies, birth injury or other conditions present from birth.

CAUSES OF DEATH IN EACH AGE GROUP, AUSTRALIA, 1984

Causes of death	Age group (years)									Total (a)
	Under one	1-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and over	
Infectious and parasitic diseases . . . . .	28	18	14	13	15	39	75	112	203	517
Neoplasms . . . . .	14	183	155	342	944	2,329	5,869	7,975	8,292	26,105
Endocrine, nutritional and metabolic diseases and immunity disorders . . . . .	17	32	32	30	46	105	334	661	1,101	2,358
Diseases of the nervous system and sense organs . . . . .	34	88	53	55	79	95	185	335	593	1,517
Diseases of the circulatory system . . . . .	16	26	89	225	755	2,142	6,827	13,816	30,382	54,289
Diseases of the respiratory system . . . . .	53	56	58	62	115	256	865	2,177	4,157	7,802
Diseases of the digestive system . . . . .	7	10	13	61	154	354	711	765	1,587	3,662
Congenital anomalies . . . . .	622	94	30	25	25	16	28	19	23	882
All other diseases (b) . . . . .	819	18	101	143	78	151	364	754	2,326	4,754
Signs, symptoms and ill-defined conditions . . . . .	510	26	18	18	16	13	20	16	138	777
Accidents, poisonings and violence . . . . .	43	483	1,635	1,214	840	692	666	624	1,052	7,251
<b>All causes . . . . .</b>	<b>2,163</b>	<b>1,034</b>	<b>2,198</b>	<b>2,188</b>	<b>3,067</b>	<b>6,192</b>	<b>15,944</b>	<b>27,254</b>	<b>49,854</b>	<b>109,914</b>

Causes of death	RATE (c)									
	Under one	1-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and over	Total
Infectious and parasitic diseases . . . . .	12	1	1	1	1	3	5	11	35	3
Neoplasms . . . . .	6	5	6	13	45	152	407	807	1,431	168
Endocrine, nutritional and metabolic diseases and immunity disorders . . . . .	7	1	1	1	2	7	23	67	190	15
Diseases of the nervous system and sense organs . . . . .	15	3	2	2	4	6	13	34	102	10
Diseases of the circulatory system . . . . .	7	1	3	9	36	140	474	1,399	5,243	349
Diseases of the respiratory system . . . . .	23	2	2	2	5	17	60	220	717	50
Diseases of the digestive system . . . . .	3	—	—	2	7	23	49	77	274	24
Congenital anomalies . . . . .	266	3	1	1	1	1	2	2	4	6
All other diseases (b) . . . . .	350	1	4	6	4	10	25	76	401	31
Signs, symptoms and ill-defined conditions . . . . .	218	1	1	1	1	1	1	2	24	5
Accidents, poisonings and violence . . . . .	18	14	62	48	40	45	46	63	182	47
<b>All causes . . . . .</b>	<b>924</b>	<b>30</b>	<b>83</b>	<b>86</b>	<b>146</b>	<b>405</b>	<b>1,107</b>	<b>2,759</b>	<b>8,603</b>	<b>707</b>

CAUSES OF DEATH IN EACH AGE GROUP, AUSTRALIA, 1984—continued

Causes of death	Age group (years)									Total (a)
	Under one	1-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and over	
	PERCENTAGE (d)									
Infectious and parasitic diseases . . . . .	1.3	1.7	0.6	0.6	0.5	0.6	0.5	0.4	0.4	0.5
Neoplasms . . . . .	0.6	17.7	7.1	15.6	30.8	37.6	36.8	29.3	16.6	23.8
Endocrine, nutritional and metabolic diseases and immunity disorders . . . . .	0.8	3.1	1.5	1.4	1.5	1.7	2.1	2.4	2.2	2.1
Diseases of the nervous system and sense organs . . . . .	1.6	8.5	2.4	2.5	2.6	1.5	1.2	1.2	1.2	1.4
Diseases of the circulatory system . . . . .	0.7	2.5	4.0	10.3	24.6	34.6	42.8	50.7	60.9	49.4
Diseases of the respiratory system . . . . .	2.5	5.4	2.6	2.8	3.7	4.1	5.4	8.0	8.3	7.1
Diseases of the digestive system . . . . .	0.3	1.0	0.6	2.8	5.0	5.7	4.5	2.8	3.2	3.3
Congenital anomalies . . . . .	28.8	9.1	1.4	1.1	0.8	0.3	0.2	0.1	—	0.8
All other diseases (b) . . . . .	37.9	1.7	4.6	6.5	2.5	2.4	2.3	2.8	4.7	4.3
Signs, symptoms and ill-defined conditions . . . . .	23.6	2.5	0.8	0.8	0.5	0.2	0.1	0.1	0.3	0.7
Accidents, poisonings and violence . . . . .	2.0	46.7	74.4	55.5	27.4	11.2	4.2	2.3	2.1	6.6
<b>All causes . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Total includes 20 deaths where age is not known. (b) Includes 823 deaths from conditions originating in the perinatal period and 1,715 deaths from diseases of the genito-urinary system. (c) Rates are per 100,000 of population at risk, except for children under one year of age which are per 100,000 live births registered. (d) Percentage of all deaths within each age group.  
 Note. Due to abnormal delays in the registration process in the NSW Registry of Births, Deaths and Marriages, the number of births and deaths recorded for 1984 is lower than could be otherwise expected. For further information see ABS publications Births, Australia, 1984 (3301.0) and Deaths, Australia 1984 (3302.0).

As well as differing by age, the relative significance of certain causes of death also varies by sex, as illustrated below.

ALL DEATHS: PERCENTAGE DISTRIBUTION BY CAUSE, AUSTRALIA, 1984

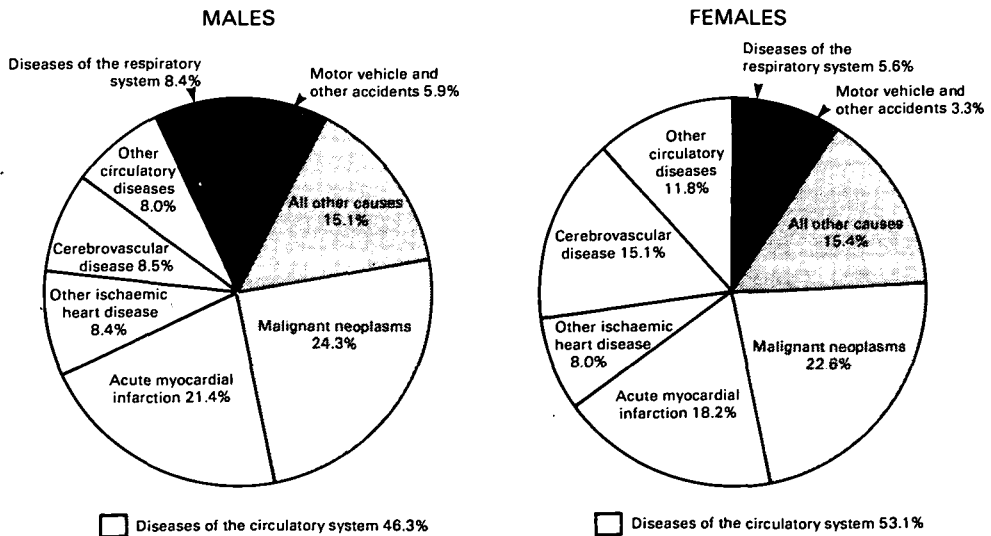


PLATE 31

### Suicides

A range of statistics relating to deaths by suicide (as determined by coroner's inquests) in Australia was published by the ABS in *Suicides, Australia 1961-1981 (Including historical series 1881-1981)* (3309.0). Statistics for later years are available on request.

### Perinatal deaths

Since deaths within the first four weeks of life (neonatal deaths) are mainly due to conditions originating before or during birth, and the same conditions can cause fetal death (stillbirth), special tabulations are prepared combining the two. These are termed 'perinatal deaths'. The statistical definition of perinatal deaths in Australia was amended in 1979 from that previously used, in accordance with a recommendation of the Ninth Revision Conference (1975) of the World Health Organization "that national perinatal statistics should include all fetuses and infants delivered weighing at least 500 grams (or, when birthweight is unavailable, the corresponding gestational age (22 weeks) or body length (25 cm crown-heel)), whether alive or dead". The table below incorporates a further recommendation of the Conference in that it shows the number of fetal, neonatal and total perinatal deaths in Australia classified by both the main condition in the fetus/infant and the main condition in the mother.

The perinatal death rate for Australia fell slightly in 1984, to 11.88 per 1,000 total births compared with 12.16 in 1983.

Of the conditions in the child, the two main groups responsible for perinatal deaths were *Hypoxia, birth asphyxia and other respiratory conditions* (37.5 per cent of the total) and *Congenital anomalies* (24.0 per cent). Thirty-six per cent of all perinatal deaths did not mention any condition in the mother as contributing to the death. Of those deaths where maternal conditions were reported, 46.3 per cent were reported as being due to *Complications of placenta, cord and membranes*.

PERINATAL DEATHS BY CAUSE, AUSTRALIA, 1984

Cause of death	Number of deaths			Rate		
	Fetal	Neonatal	Perinatal	Fetal(a)	Neonatal (b)	Perinatal (a)
<i>Conditions in fetus/infants—</i>						
Slow fetal growth, fetal malnutrition and immaturity . . . . .	93	137	230	0.39	0.59	0.98
Birth trauma . . . . .	4	27	31	0.02	0.12	0.13
Hypoxia, birth asphyxia and other respiratory conditions . . . . .	725	324	1,049	3.08	1.38	4.45
Fetal and neonatal haemorrhage . . . . .	28	75	103	0.12	0.32	0.44
Haemolytic disease of fetus and newborn . . . . .	20	3	23	0.08	0.01	0.10
Other conditions originating in the perinatal period . . . . .	513	99	612	2.18	0.42	2.60
Congenital anomalies . . . . .	197	474	671	0.84	2.03	2.85
Infectious and parasitic diseases . . . . .	9	5	14	0.04	0.02	0.06
All other causes . . . . .	4	60	64	0.02	0.26	0.27
<i>Conditions in mother—</i>						
Maternal conditions which may be unrelated to present pregnancy . . . . .	213	83	296	0.90	0.35	1.26
Maternal complications of pregnancy . . . . .	187	350	537	0.79	1.50	2.28
Complications of placenta, cord and membranes . . . . .	656	168	824	2.78	0.72	3.50
Other complications of labour and delivery . . . . .	45	78	123	0.19	0.33	0.52
No maternal condition reported . . . . .	492	525	1,017	2.09	2.24	4.32
<b>All causes—1984 . . . . .</b>	<b>1,593</b>	<b>1,204</b>	<b>2,797</b>	<b>6.76</b>	<b>5.15</b>	<b>11.87</b>
1983 . . . . .	1,619	1,350	2,969	6.63	5.57	12.16
1982 . . . . .	1,705	1,529	3,234	7.06	6.38	13.39
1981 . . . . .	1,706	1,440	3,146	7.18	6.11	13.25
1980 . . . . .	1,708	1,503	3,211	7.52	6.67	14.14
1979 . . . . .	1,757	1,605	3,362	7.82	7.20	14.96

(a) Per, 1,000 births registered (live births and stillbirths) weighing 500 grams or more at birth. (b) Per, 1,000 live births registered weighing 500 grams or more at birth.

## Cremations

State/Territory	1982		1983		1984		
	Number of cremations (b)	Number of deaths	Number of cremations (b)	Numbers of deaths	Number of crematoria (a)	Number of cremations (b)	Number of deaths
N.S.W. . . . .	21,821	42,352	21,443	40,323	18	23,322	39,114
Vic. . . . .	12,234	30,611	11,865	29,320	4	11,954	29,493
Qld . . . . .	8,547	18,149	8,073	17,200	9	8,523	17,522
S.A. . . . .	4,723	10,457	4,514	9,882	2	4,565	10,128
W.A. . . . .	4,415	8,187	4,496	8,359	3	4,831	8,514
Tas. . . . .	1,476	3,432	1,489	3,311	2	1,548	3,549
N.T. . . . .	—	573	—	738	—	—	550
A.C.T. . . . .	595	1,010	661	951	1	716	1,044
<b>Australia—</b>							
number . . . . .	<b>53,811</b>	<b>114,771</b>	<b>52,541</b>	<b>110,084</b>	<b>39</b>	<b>55,459</b>	<b>109,914</b>
per cent (c) . . . . .	46.9	..	47.7	..	..	50.5	..

(a) At 31 December. (b) Cremations are not necessarily carried out in the State or Territory where the death was registered. (c) Cremations as a percentage of all deaths.

Source: Services and Investment Ltd.

## HEALTH RELATED SURVEYS CONDUCTED BY THE ABS

## Australian Health Surveys

The last Australian Health Survey was conducted throughout the twelve month period February 1983 to January 1984. The main objective of the survey was to obtain information about the health of Australians and their use of and need for various health-related services and facilities. It is the second national survey of its kind to be conducted by the ABS. The first was conducted during 1977-78.

The approach adopted to collect health information was to ascertain whether any of a range of health-related actions was taken in the reference period and to record the various reasons for which the action was taken. The actions covered included episodes in hospital; consultations with a doctor, dentist or other health professional; consumption or use of medications; and, days away from school or work.

The survey aimed to identify wherever possible the specific illness or injury for which the action was taken. However, some persons may have taken a health-related action for which no specific illness or injury could be identified or for reasons other than illness or injury, such as pregnancy supervision, immunisation, contraception etc. Therefore reasons identified as leading to a health-related action were classified into two broad groups: illness conditions and 'other reasons for action'.

In addition to the reasons for taking a health-related action, further information was obtained about the actions themselves eg whether surgery undergone in hospital, type of treatment received during consultation with doctor or dentist, number of times a particular action was taken during the reference period, whether actions such as use of medicines or reduced activity were advised by a doctor etc. Information was also collected on illnesses and injuries experienced for which no action was taken. Summary results of the survey are published in *Australian Health Survey 1983* (4311.0) and are also shown in the tables below; more detailed results are to be published in a series of publications (4325.0 and 4356.0 to 4358.0).

PERSONS: WHETHER HEALTH RELATED ACTION TAKEN OR ILLNESS CONDITIONS EXPERIENCED DURING THE TWO WEEKS PRIOR TO INTERVIEW STATES AND TERRITORIES, 1983 ('000)

State of interview	Action Taken	No Action Taken	Illness Experienced	No Illness	Total
N.S.W. . . . .	3,712.7	1,560.6	3,236.5	2,036.8	5,273.3
Vic . . . . .	2,771.4	1,220.1	2,445.7	1,545.8	3,991.5
Qld . . . . .	1,803.6	637.2	1,548.6	892.2	2,440.8
S.A. . . . .	989.8	336.7	903.8	422.7	1,326.5
W.A. . . . .	965.2	377.3	867.4	475.1	1,342.5
Tas. . . . .	268.3	160.0	222.6	205.8	428.4
N.T. . . . .	90.2	43.3	74.1	59.3	133.5
A.C.T. . . . .	165.8	64.7	147.6	82.8	230.4
<b>TOTAL . . . . .</b>	<b>10,767.0</b>	<b>4,399.9</b>	<b>9,446.2</b>	<b>5,720.6</b>	<b>15,166.9</b>



**PERSONS WHO TOOK A HEALTH RELATED ACTION DURING THE TWO WEEKS PRIOR TO  
INTERVIEW: SELECTED ACTIONS BY SEX, AUSTRALIA, 1983.  
(<sup>'000</sup>)**

<i>Type of Action</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>
Consulted a doctor . . . . .	1,145.9	1,525.7	2,671.6
Consulted a dentist . . . . .	347.4	407.2	754.7
Consulted an other health professional . . . . .	429.5	549.9	979.4
Took medicine . . . . .	4,497.3	5,612.8	10,110.2
Took day(s) off work . . . . .	287.8	201.6	489.4
Took day(s) off school . . . . .	180.2	200.8	380.9
<b>Total persons taking action . . . . .</b>	<b>4,863.0</b>	<b>5,904.0</b>	<b>10,767.0</b>

*Note:* Each person may have taken more than one type of action.

### Health Insurance Surveys

These surveys have been conducted in March for the years 1979-83. In 1984 the survey was conducted in May and covered wage and salary earners in capital cities only.

The 1984 survey sought information on hospital and ancillary insurance taken out over and above that which is available under Medicare. Results are published in *Health Insurance of Employed Wage and Salary Earners in Capital Cities, May 1984* (4335.0).

It is planned to conduct another Health Insurance Survey in March 1986.

### Hearing Survey

In September 1978 the ABS conducted a survey to obtain information about hearing problems of persons aged 15 years or more. Results of the survey have been published in the publication *Hearing and the Use of Hearing Aids (Persons aged 15 years or more) September 1978* (4336.0).

### Sight Survey

During February to May 1979 the ABS conducted a survey to obtain information on sight problems and the use of glasses/contact lenses for the Australian population aged 2 years or more. Results of the survey have been published in the publication *Sight, Hearing and Dental Health (persons aged 2 to 14 years) February-May 1979* (4337.0).

### Dental Surveys

During February to May 1979 the ABS conducted a survey to obtain information on the dental health of the Australian population aged 2 years or more. Information collected included time since last visit to a dentist; number of visits in last 12 months; treatment received at last visit and usual number of check-ups per year. Data were also collected for persons aged 15 years or more as to whether false teeth were worn.

Results of the survey for persons aged 2 to 14 years have been published in the publication *Sight, Hearing and Dental Health (persons aged 2 to 14 years) February-May 1979* (4337.0). For persons aged 15 years or more the relevant publication is *Dental Health (persons aged 15 years or more) February-May 1979* (4339.0).

A survey was conducted during November 1983 to obtain information on the usage of dental services at schools and at private practices by children aged 2 to 14 years. Results are published in *Childrens Dental Health Survey, Australia, November 1983* (4350.0).

### Immunisation Surveys

Data was collected during the Australian Health Survey 1977-78 on the immunisation status of persons aged 2 to 5 years in relation to Poliomyelitis, Diphtheria, Whooping Cough and Tetanus and results were published in *Australian Health Survey, Sabin and Triple Antigen Vaccination, 1977-78* (4316.0).

In November 1983, a survey was held to obtain information on the immunisation status of persons aged 0-6 years against Poliomyelitis, Diphtheria, Whooping Cough and Tetanus.

Information about the immunisation status of females aged 15 to 34 years in relation to Rubella was obtained during a survey conducted throughout Australia in March 1983.

Results of the survey are published in *Rubella Immunisation Survey (females aged 15 to 34 years) March 1983* (4353.0).

### Survey of handicapped persons

During February to May 1981 a survey was conducted throughout Australia to obtain information about the nature and extent of various disabilities and handicaps in the Australian community.

The survey examined the needs of and the kinds of problems experienced by persons with different types of handicaps. The areas examined in respect of handicapped persons included causes, disabling conditions, services, aids, accommodation, employment, education, income, transport, recreation and institutionalised care.

The sample for the survey consisted of two distinct parts. In the first part, a sample of 33,000 households was selected from all households in Australia and in the second part, a sample of 5,300 patients or residents was selected from 723 randomly selected health establishments throughout Australia.

Results of the survey are published in *Handicapped Persons, Australia* (4343.0).

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# CHAPTER 11

## LAW AND ORDER

### THE LAW IN AUSTRALIA

#### **Nature and composition**

The laws of a country represent the common body of rules, whether proceeding from legislation, executive action, court judgments or custom, that a state or community recognises as binding on its citizens or members, and which are enforceable by judicial means. In Australia, the law consists basically of:

- Acts passed by the Federal Parliament acting within the scope of its powers under the Australian Constitution, together with regulations, rules and orders made under such Acts;
- Acts and Ordinances passed in respect of the Australian Capital Territory and the Northern Territory of Australia, together with regulations, rules and orders made under such Acts and Ordinances;
- Acts passed by State Parliaments and the Legislative Assembly of the Northern Territory, together with regulations, rules and orders made under such Acts;
- so much of the common or statute law of England that still applies to Australia and remains unrepealed; and
- the common law, consisting of judicial decisions.

These various laws relate to a number of subject-matters, including constitutional law, criminal law, civil law, family law and industrial law.

#### **Federal and State responsibilities**

Under the Australian Constitution, the Commonwealth of Australia is empowered to make laws in relation to certain matters specified in the Constitution, e.g. in relation to trade and commerce, taxation, defence and external affairs. In relation to some of these matters, the powers of the Commonwealth are concurrent with those of the Australian States and Territories in that they may be exercised by either the Commonwealth, the States or the Territories. In relation to some other specified topics the Commonwealth's power is absolute, and in all areas of Federal jurisdiction, Commonwealth laws are binding on the Australian States and Territories.

The Australian States and Territories have independent jurisdiction in all matters not otherwise specifically invested in the Commonwealth of Australia and it is the statute law and the common law of the States and Territories that primarily govern the day-to-day lives of most Australians. With certain exceptions, such as traffic laws, State and Territorial law applies normally only to persons who are residents of the State or Territory concerned and to things located or events occurring within such State or Territory.

The Common law is uniform throughout Australia although statute law often varies between the States and Territories. However, some of the problems arising from these differences have become recognised over recent years and attempts are now being made, wherever possible, towards the enactment of uniform laws in areas of State and Territory jurisdiction.

#### **Administration**

Administration of the law in Australia is undertaken by the responsible government concerned, principally through Federal, State and Territorial Police Forces, the National Crime Authority, and State and Territorial corrective or penal services. There is no independent Federal corrective service, and the relevant State or Territorial agencies provide corrective services for Federal offenders.

The various law enforcement agencies involved in the administration of law operate in such a way that the activities of one agency may affect the activities of another, e.g. a criminal offence reported to the police may lead to the arrest, charge and court appearance

of the offender, and subsequent provision of corrective (e.g. imprisonment, probation) or welfare services. The agencies involved, and the relationship between them, may vary according to the laws, agencies and types of matters or offenders involved.

### **Law reform**

Reform of the law is undertaken principally through State and Commonwealth Parliaments and Attorneys-General in some instances acting on recommendations provided by State and the Australian Law Reform Commissions, and by State Supreme and Federal Courts.

Law Reform Commissions have been established as statutory authorities in all States (except South Australia) to undertake review of State laws, and report findings and recommendations for reform of those laws, to State Parliaments and Attorneys-General. (In South Australia, a Law Reform Committee was established by proclamation to perform similar functions in that State.) In addition, in Victoria there is a Chief Justice's Law Reform Committee and a Victorian Legal and Constitutional Committee established under the *Parliamentary Committees (Joint Investigatory Committees) Act 1982*. These agencies have functions to recommend reform of the law. Acceptance of recommendations depends upon governmental and parliamentary reaction to the proposals.

### **The Australian Law Reform Commission**

The Australian Law Reform Commission (ALRC), which commenced operations in 1975 under the *Law Reform Commission Act 1973*, was established to report on the review, simplification and modernisation of those laws concerning matters consigned by the Australian Constitution to the jurisdiction of the Commonwealth Parliament, and to consider proposals for the uniformity of laws of the States and Territories. The Commission is required to make reports to the Attorney-General arising out of such review or consideration, and to make such recommendations as it thinks fit.

The ALRC has assumed the functions formerly undertaken by the A.C.T. Law Reform Commission, and has the responsibility for review of Territorial law operating in the Australian Capital Territory. To assist in this a branch office has been set up in Canberra.

In undertaking its function the normal procedure of the Commission is as follows. Upon receipt of a reference, the Commission advertises and calls for public submissions in relation to the reference, and prepares consultative papers examining the issues for distribution among groups thought to have a special interest in the subject matter. Public sittings are conducted, and in the light of submissions received, a final report containing draft legislation is prepared for submission to the Attorney-General. The Commission, which consisted of five full-time, and seven part-time members at 30 June 1984, makes extensive use of honorary consultants.

To 30 June 1984, the Commission has completed reports on the following references: complaints against police and criminal investigation; alcohol, drugs and driving; consumers in debt; defamation; sentencing of federal offenders; human tissue transplants; lands acquisition and compensation; insurance intermediaries; child welfare; insurance contracts; privacy and foreign state immunity. Legislation following the recommendations contained in these reports has been enacted in some cases. In other cases, the proposals made by the Commission are under consideration by Parliament or the appropriate Commonwealth Department. Current references include debt recovery laws, access to court (standing to sue and class actions), Aboriginal customary laws, evidence, service and execution of process, Admiralty jurisdiction, contempt of court, general insolvency, matrimonial property, domestic violence, and community law reform in the A.C.T.

## **COURTS: STRUCTURE AND FUNCTIONS**

### **Federal Courts**

The judicial power of the Commonwealth of Australia is vested in the High Court of Australia, in the Federal courts created by the Federal Parliament and in the State courts invested by Parliament with Federal jurisdiction. The nature and extent of the judicial power of the Commonwealth is prescribed by Chapter III of the Australian Constitution. For details of the Commonwealth of Australia Constitution Act *see* chapter 1.

### **High Court of Australia**

The Australian Constitution vests the judicial power of the Commonwealth in the High Court, in such other Federal courts as the Parliament creates, and in such other courts as it invests with Federal jurisdiction. The High Court consists of a Chief Justice and six other

Justices. Sittings of the Court are now held mainly at its seat in Canberra. The High Court has both original and appellate jurisdiction.

The Constitution gives original jurisdiction to the High Court in all matters:

- (i) arising under a treaty;
- (ii) affecting consuls or other representatives of other countries;
- (iii) in which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party;
- (iv) between States, or between residents of different States, or between a State and a resident of another State; and
- (v) in which a writ of mandamus or prohibition, or an injunction, is sought against an officer of the Commonwealth.

The High Court may remit to the Federal Court of Australia matters within (iii) on previous page.

The Constitution allows the Parliament to give the High Court additional original jurisdiction within limits. The Parliament has given the Court such jurisdiction in all matters arising under the Constitution or involving its interpretation and in trials of indictable offences against the laws of the Commonwealth. The Court is also a Court of Disputed Returns.

State Courts are excluded from exercising jurisdiction in relation to some matters over which the High Court has jurisdiction. These matters are:

- (i) matters arising directly under any treaty;
- (ii) suits between States, or between persons suing or being sued on behalf of different States, or between a State and a person suing or being sued on behalf of another State;
- (iii) suits by the Commonwealth, or any person suing on behalf of the Commonwealth, against a State, or any person being sued on behalf of a State;
- (iv) suits by a State, or any person suing on behalf of a State, against the Commonwealth or any person being sued on behalf of the Commonwealth; and
- (v) matters in which a writ of mandamus or prohibition is sought against an officer of the Commonwealth or a Federal court.

The High Court may, however, remit to a Federal Court of Australia, or to a State or Territory court, a matter commenced in the High Court by virtue of its executive jurisdiction shown under (i) to (iv) above. Matters referred to in (v) above, may, subject to certain exceptions, be remitted from the High Court to the Federal Court of Australia, but not to a State or Territory court.

Any matter before a State or Territory or Federal court which arises under the Constitution or involves its interpretation may be removed into the High Court.

The Constitution also gives the High Court appellate jurisdiction. Subject to such exceptions and regulations as are prescribed by the Parliament, the High Court can hear appeals from any decision of:

- (i) any Justice or Justices exercising the original jurisdiction of the High Court;
- (ii) any other Federal court, or court exercising Federal jurisdiction; and
- (iii) the Supreme Court of any State, or of any other State Court from which an appeal lay to the Privy Council at the time the Commonwealth was established.

The High Court has to give special leave before an appeal can be brought to it from the Supreme Court of a State, any other Court of a State exercising Federal jurisdiction or the Federal Court of Australia.

### Appeals to the Privy Council

The jurisdiction which the Privy Council formerly had to hear appeals from decisions of the High Court has, for all practical purposes, disappeared (see *Privy Council (Limitation of Appeals) Act 1968* and *Privy Council (Appeals from the High Court) Act 1975*).

### Federal Court of Australia

The Federal Court of Australia was created by the *Federal Court of Australia Act 1976* and began to exercise its jurisdiction on 1 February 1977.

The Court consists of the Industrial Division and the General Division. Matters under the *Conciliation and Arbitration Act 1904* are dealt with in the Industrial Division. All other matters are dealt with in the General Division. The Court sits as required in each State and in the Australian Capital Territory and the Northern Territory.

The Court has such original jurisdiction as is invested in it by laws made by the Parliament. Except in cases where a hearing had actually started before 1 February 1977, the jurisdiction formerly exercised by the Federal Court of Bankruptcy and the Australian Industrial Court has been transferred to it. Important jurisdiction in the Court includes matters under the *Administrative Decisions (Judicial Review) Act 1977* and certain matters under the *Trade Practices Act 1974*.

The Federal Court of Australia has been conferred with original jurisdiction, concurrent with that of the High Court with respect to matters in which a writ of mandamus or prohibition is sought against an officer of the Commonwealth.

The Federal Court of Australia has appellate jurisdiction over decisions of single judges of the Court, decisions of the Supreme Courts of the Territories and certain decisions of State Supreme Courts exercising Federal jurisdiction (for example, under the *Income Tax Assessment Act 1936* and the *Patents Act 1952*).

#### **Australian Industrial Court and the Federal Court of Bankruptcy**

Matters in which a hearing had begun in the Australian Industrial Court or the Federal Court of Bankruptcy before 1 February 1977 continue to be heard in these Courts. Otherwise, the jurisdiction formerly exercised by these Courts is now vested in the Federal Court of Australia.

#### **Family Law**

The *Family Law Act 1975* commenced operation on 5 January 1976. It introduced a new law dealing with the dissolution and nullity of marriage, custody and welfare of the children, maintenance and the settlement of property between the parties to a marriage. The Act also created the Family Court of Australia as a specialist court dealing only with matrimonial and associated proceedings.

The main change made by the Act is that fault is no longer taken into account as a ground for divorce. The Act provides that there is only one ground for divorce—that of irretrievable breakdown of a marriage which is established if the husband and wife have separated and have lived apart from each other for 12 months and there is no reasonable likelihood of reconciliation.

Proceedings under the Family Law Act are dealt with by the Family Court of Australia and by certain other courts in the States and Territories. Except in certain areas of Western Australia, Magistrates' Courts and Courts of Petty Sessions have jurisdiction in all proceedings under the Act except for:

- proceedings for dissolution or nullity of marriage; and
- defended proceedings for custody or concerning property worth more than \$1,000, unless the parties agree to the matter being heard by a Magistrates' Court or the Court of Petty Sessions.

A State Family Court has been established in Western Australia to deal with family law matters in that State.

Under the Act, great emphasis is placed on the counselling services available through the Family Courts to persons involved in proceedings and to any persons who have encountered marriage problems. It is not necessary to start proceedings to make use of these services.

A Court exercising jurisdiction under the Family Law Act is required to have regard to the following principles:

- the need to preserve and protect the institution of marriage as the union of a man and a woman to the exclusion of all others voluntarily entered into for life;
- the need to give the widest possible protection and assistance to the family as the natural and fundamental group unit of society, particularly while it is responsible for the care and education of dependent children;
- the need to protect the rights of children and to promote their welfare; and
- the means available for assisting parties to a marriage to consider reconciliation or the improvement of their relationship to each other and to the children of the marriage.

In relation to the guardianship and custody of children, the Family Law Act provides that both parties to a marriage have, subject to a court order to the contrary, the joint guardianship and custody of any children of the marriage. However, one parent can ask the Court for sole custody of a child even if no divorce has been sought.

In disputes over custody, a child may be separately represented. The paramount consideration for the court in the determination of all such disputes is the welfare of the child. However, where a child has reached 14 years of age the Court may not make an order

contrary to his or her wishes unless there are special circumstances. In relation to the welfare of children a divorce decree usually will not become effective unless the Court is satisfied that proper arrangements have been made by the parties for the welfare of their children.

Under the Family Law Act, the right of one party to a marriage to maintenance from the other is based on the needs of the party seeking it and the ability of the other party to pay. An application for maintenance may be made by either husband or wife, and irrespective of whether the parties intend to divorce.

There are specific matters for the Court to consider when it is dealing with maintenance applications. These include:

- the age and state of health of the parties;
- the income, property and financial resources of each of the parties and their financial obligations;
- whether either party is entitled to a pension or superannuation;
- the length of the marriage and what is an appropriate standard of living for each party;
- whether either party has to care for children;
- the extent to which the marriage has affected the earning capacity of the applicant; and
- the possibility of the applicant taking on a training course or further educational course to improve his or her employment prospects.

The Act also provides for the registration and court approval of maintenance agreements made by the parties.

Both parties are liable to maintain their children according to their respective means and the Court is guided by similar considerations in deciding what order to make.

The Court has power to settle disputes about the family assets, including the power to order a transfer of legal interests in property. When dealing with these disputes, the Court considers the interest each party has in the property, the contributions made by each party during the marriage, and the matters the Court is required to consider in dealing with maintenance applications. The Act directs the Court to look both at the financial contributions made by the parties and at the contribution made by either party in the capacity of homemaker or parent.

#### **Family Court of Australia**

The Judges of the Family Court are chosen because of their suitability to deal with matters of family law by reason of their training, experience and personality. They do not wear wigs and gowns. Staff attached to the Court include trained counsellors and legally qualified Registrars and Deputy Registrars.

Proceedings under the Act in the Family Court are heard in private. No publicity about any proceedings under the Act is permitted, unless otherwise directed by the Court. The publication of law court lists and law reports, or other publications of a technical character directed to the legal or medical professions, is exempted from this prohibition.

The Family Court aims to be a "helping" court. A Principal Director of Court Counselling and a staff of court counsellors are attached to the Court to help parties to a marriage settle their problems. This help is available to parties who are not even contemplating divorce or other proceedings, but who may need counselling assistance. These services complement those already provided by voluntary marriage counselling agencies. People may approach the Court counselling service directly—in person, in writing, by telephone or through a legal practitioner.

The Court has pamphlets printed in Arabic, Turkish, Italian, Greek, Serbo-Croat, Mandarin Chinese, Malaysian and Spanish to explain the operation of the Australian family law.

### **State and Territory Courts**

Australian State and Territory courts have original jurisdiction in all matters brought under State or Territory statute laws, and in matters arising under Federal laws, where such matters have not been specifically reserved to courts of Federal jurisdiction. Most criminal matters, whether arising under Federal, State or Territory law, are dealt with by State and Territory courts.

Each State and Territory court system is organised and operates independently. However, within each system, which comprises both courts of general jurisdiction and specialist courts and tribunals, the courts are organised hierarchically according to the nature of the matters with which they may deal.

**Appeals**

County and District Courts and State and Territory Supreme Courts have jurisdiction to hear appeals against the decisions of lower courts and some specialist tribunals.

The procedures concerning the right of appeal are laid down by statute in each State and Territory, and appeals may be lodged against matters such as the correctness of the verdict or the severity of the sentence imposed. However, appeals against Supreme Court decisions are heard in most States by a Full Bench of the Supreme Court which usually comprises three judges of the Supreme Court. Appeals from State Supreme Court decisions may be taken to the Federal Court of Australia or the High Court of Australia or the Privy Council depending on the nature of the matter involved. Appeals from decisions of Territory Supreme Courts are taken to the Federal Court of Australia or to the High Court if special leave is given by the High Court.

**Special Courts and Tribunals**

Each Australian State and Territory administers particular areas of the law through specialist courts or tribunals, such as Small Claims Courts, Licensing Courts, etc. These courts or tribunals deal primarily with civil matters or matters of an administrative nature.

**Courts of Marine Inquiry**

Matters which come within the jurisdiction of Courts of Marine Inquiry are contained in the *Navigation Act 1912*. The principal areas of jurisdiction are to make inquiries into casualties, all missing ships, or entailing loss of life on or from ships and to charges of incompetency or misconduct.

When the Department of Transport is advised of an incident which may warrant the convening of a Court of Marine Inquiry, the Minister will appoint an officer to conduct a Preliminary Investigation. The officer will conduct interviews with the parties involved and based on the results of these interviews advise the Minister as to whether or not the circumstances warrant a request by the Minister for a Court of Marine Inquiry to be convened. The Governor-General by proclamation establishes the Court of Marine Inquiry. Findings of the Court are forwarded to the Minister as well as any observations the Court thinks fit to make.

**Statistics**

Information relating to the operation of courts in particular Australian States may be obtained from the respective State Year Books.

**Administrative Bodies****Administrative Appeals Tribunal**

The Administrative Appeals Tribunal was established by the *Administrative Appeals Tribunal Act 1975* and came into operation on 1 July 1976. Its President is a Judge of the Federal Court of Australia. It is an independent tribunal whose function is to review decisions made by Commonwealth Ministers, authorities and officials under certain laws of the Commonwealth. The Tribunal is able to substitute its own decision in those areas in which it has jurisdiction. The Tribunal has jurisdiction under more than 200 enactments including decisions under the *Social Services Act 1947*, *Compensation (Commonwealth Government Employees) Act 1971*, *Migration Act 1958*, *Customs Act 1901*, *Export Market Development Act 1974*, the Air Navigation Regulations, the *Freedom of Information Act 1982* and the *Repatriation Act 1920*. Further additions to the Tribunal's jurisdiction are made from time to time.

The Principal Registry is in Canberra and there are Tribunal Registries in each capital city.

The Administrative Review Council was also established by the *Administrative Appeals Tribunal Act 1975*. The principal functions of the Administrative Review Council are to make recommendations to the Attorney-General on rights of review of administrative decisions and on the procedures of administrative tribunals.

**Administrative Decisions (Judicial Review) Act 1977**

The *Administrative Decisions (Judicial Review) Act 1977*, which came into operation on 1 October 1980, provides for judicial review in the Federal Court of Australia of administrative action taken under Commonwealth legislation. The Court is empowered where an order



of review is sought by an aggrieved person to review the lawfulness of a decision, conduct leading up to the making of a decision or circumstances where there has been failure to make a decision. The grounds on which review may be sought and the powers of the Court are set out in the Act. In many cases, a person who is entitled to seek judicial review in respect of an administrative decision may seek a statement of reasons for the decision from the decision-maker.

### **Commonwealth Ombudsman**

The office of the Commonwealth Ombudsman was established by the *Ombudsman Act 1976* and commenced operation in June 1977. Additional responsibilities have been given to the office through the *Complaints (Australian Federal Police) Act 1981*, the *Freedom of Information Amendment Act 1983* and the *Ombudsman Amendment Act 1983*. The Ombudsman is empowered to investigate complaints about the administrative actions of Commonwealth Government departments and prescribed authorities, and complaints about the conduct of members of the Australian Federal Police, and its practices and procedures. Under the *Ombudsman Amendment Act 1983* the Ombudsman is empowered to investigate complaints from members or former members of the Australian Defence Forces relating to service in the Defence Forces or as a consequence of a person serving or having served in the Defence Forces.

The Ombudsman is also empowered to investigate complaints about the actions of agencies in dealing with requests made under the *Freedom of Information Act 1982* and may represent a complainant before the Administrative Appeals Tribunal to seek review of a refusal to give access.

Where the Ombudsman is of the opinion, after completing an investigation into a complaint, that remedial action is required he reports to the department or authority concerned and may include any recommendations he thinks fit to make. If the department or authority fails to comply with a recommendation contained in his report, the Commonwealth Ombudsman may report to the Prime Minister and to the Federal Parliament. The Central Office of the Commonwealth Ombudsman is located in Canberra and there are regional offices in Sydney, Melbourne, Brisbane, Perth and Adelaide. In Tasmania, the Commonwealth Ombudsman is represented by the *Tasmanian Ombudsman* and in the Northern Territory, he is represented by the *Northern Territory Ombudsman*.

### **The Human Rights Commission**

The Human Rights Commission was set up by the Commonwealth Government in December 1981 to *promote* and *protect* human rights in Australia. The human rights with which it is concerned are those set out in six United Nations instruments:

- The International Covenant on Civil and Political Rights;
  - The Declaration of the Rights of the Child;
  - The Declaration on the Rights of Mentally Retarded Persons;
  - The Declaration on the Rights of Disabled Persons;
  - The International Convention on the Elimination of All Forms of Racial Discrimination;
  - and
  - The Convention on the Elimination of All Forms of Discrimination Against Women.
- The Commission works under three Acts—the *Human Rights Commission Act 1981*, the *Racial Discrimination Act 1975*, and the *Sex Discrimination Act 1984*.

Under the Human Rights Commission Act the functions of the Commission are fourfold:

- (i) to review legislation for its consistency with human rights;
- (ii) to inquire into and, where practicable, effect a settlement of issues, including complaints, that have come to its notice;
- (iii) to promote understanding, acceptance and public discussion of human rights; and
- (iv) to undertake and co-ordinate research and educational programs affecting human rights.

Where the Commission considers a change in Commonwealth law or practice is required, it is to report this to the Attorney-General, and its reports must be made public by tabling in the Parliament.

Under the Racial Discrimination Act, the Commission is charged with functions in relation to racial discrimination similar to those numbered (ii) to (iv) above in relation to human rights generally.

Under the Sex Discrimination Act, the Commission is charged with functions in relation to sex discrimination similar to those numbered (i) to (iv) above.

Investigation and resolution of complaints made under the Racial Discrimination Act is carried out by the Commissioner for Community Relations on behalf of the Commission.

Complaints made under the Sex Discrimination Act are investigated by the Sex Discrimination Commissioner who endeavours, by conciliation, to reach a settlement of the matter. Complaints which cannot be settled by conciliation can be referred to the Human Rights Commission.

The Racial Discrimination Act applies regardless of whether the discrimination falls within Commonwealth, State or Northern Territory jurisdiction. The human rights function is related to Commonwealth laws and practices under those laws, although the Human Rights Commission Act provides for co-operation with State agencies in the promotion of human rights. The Sex Discrimination Act applies throughout Australia, however, it may not apply to every act of discrimination because of some limitations on Commonwealth powers. In States that have anti-discrimination legislation, people making complaints have a choice of bringing their complaints under either the State Act or the Commonwealth Act; but a complaint cannot be made under both Acts.

### **Freedom of Information Act 1982**

The *Freedom of Information Act 1982* which came into operation on 1 December 1982 has two objectives:

- to make available to the public information about the rules, practices and operations of Commonwealth Government departments and authorities; and
- to create a general right of access to documents in the possession of Ministers and agencies.

In order to achieve these objectives the Act defines the rights of members of the public to obtain access to documents, and sets out a range of obligations and restrictions on departments and the public for exercising these rights.

The right of access does not extend to all documents. Exempt are:

- certain documents to which the *Archives Act 1982* applies;
- documents affecting national security, defence, international relations and relations with States;
- Cabinet and Executive Council documents;
- internal working documents (subject to certain limitations on what may be exempt);
- documents affecting enforcement of the law and protection of public safety;
- other documents exempt by reason of secrecy provisions of other enactments, financial or property interests of the Commonwealth, personal privacy, legal professional privilege, etc.;
- documents made available for purchase or open access upon payment of a fee; and
- documents created before 1 December 1982.

However, there are two exemptions to this last restriction on access:

- a person has a right of access to documents created before 1 December 1982, necessary to the understanding of a document already legally in that person's possession; and
- individuals have the right of access to documents which predate the commencement of the Act by up to five years, providing that the documents relate to the individual.

The public is not required to provide reasons for requesting access to documents. However, all requests under the Act should be in writing and provide such information concerning the document as is reasonably necessary to enable a responsible officer to identify the document. Where a person wishes to make a request or has made a request that does not comply with the provisions of the Act relating to requests for access it is the duty of the agency to take reasonable steps to assist the person to make the request in a manner that complies with the Act.

Provisions exist whereby a person may apply to have an amendment made to information relating to that person's own personal affairs

### **Royal Commissions—Commonwealth**

Australian Governments have from time to time established Royal Commissions to inquire into, and report on, matters of public concern.

A Royal Commission is established by the Governor-General, on the advice of the Government, issuing a commission to a person or persons to inquire into and report on

specified matters. At the end of its inquiry, a Royal Commission presents its report to the Governor-General for consideration by the Government.

The power to issue Letters Patent to inquire is a prerogative of the Crown. The *Royal Commissions Act 1902* confers powers on a Royal Commission to compel the attendance of persons, the giving of evidence, and the production of papers. It also creates a number of offences (e.g. failure to attend a Royal Commission when summoned, or to produce papers) and gives some protection to Commissioners and witnesses against legal liability. The constitutional foundation of the Royal Commissions Act is section 51 (xxxix) of the Constitution, which provides that the Commonwealth Parliament may make laws with respect to 'matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or office of the Commonwealth.

#### LETTERS PATENT ISSUED FROM 1.7.80 TO 30.6.85

<i>Name of Royal Commission</i>	<i>Commissioner(s)</i>	<i>Date of issue of Letters Patent</i>
Royal Commission on the Activities of the Federated Ship Painters and Dockers Union (joint Commonwealth/Victoria Royal Commission)	Mr F. X. Costigan, Q.C.	10 September 1980
(a) Royal Commission of Inquiry into Drug Trafficking (joint Commonwealth/New South Wales/Victoria/Queensland Royal Commission)	The Hon. Mr Justice D. G. Stewart	(a) 25 June 1981
(b) Royal Commission of Inquiry into the Activities of the Nugan Hand Group (joint Commonwealth/New South Wales Royal Commission)		(b) 28 March 1983
(c) Royal Commission of Inquiry into Alleged Telephone Interceptions		(c) 29 March 1985
Royal Commission into the Activities of the Australian Building Construction Employees' and Builders Labourers' Federation (joint Commonwealth/Victoria Royal Commission)	Mr J. S. Winneke, Q.C.	20 August 1981
Royal Commission into Australian Meat Industry (joint Commonwealth/Victoria Royal Commission)	The Hon. Mr Justice A. E. Woodward, O.B.E.	12 September 1981
Royal Commission on the Use and Effects of Chemical Agents on Australian Personnel in Vietnam	The Hon. Mr Justice P. G. Evatt, D.S.C.	13 May 1983
Royal Commission on Australia's Security and Intelligence Agencies	The Hon. Mr Justice R. M. Hope, C.M.G.	17 May 1983
Commission of Inquiry into Compensation Arising from Social Security Conspiracy Prosecutions	The Hon. Dame Roma Mitchell, D.B.E.	9 February 1984
Royal Commission into British Nuclear Tests in Australia Between 1952 and 1963	The Hon. J. R. McClelland Mrs J. Fitch Dr W. J. A. Jonas	27 June 1985

#### FINAL ROYAL COMMISSION REPORTS PRESENTED FROM 1.7.80 TO 30.6.85

<i>Name of Royal Commission</i>	<i>Date of presentation</i>	<i>Tabled in the Parliament</i>
Commission of Inquiry into the Efficiency and Administration of Hospitals	29 December 1980	25 February 1981
Royal Commission into the Activities of the Australian Building Construction Employees' and Builders Labourers' Federation	27 May 1982	20 October 1982
Royal Commission into Australian Meat Industry	17 September 1982	21 September 1982
Royal Commission of Inquiry into Drug Trafficking (Clark Reference)	28 February 1983	31 May 1983
Royal Commission on the Activities of the Federated Ship Painters and Dockers' Union	26 October 1984	22 February 1985
Royal Commission on Australia's Security and Intelligence Agencies	20 December 1984	22 May 1985

#### Consumer Affairs

The Commonwealth involvement in consumer affairs derives substantially from the *Trade Practices Act 1974*. The Attorney-General has responsibility for Part V (Consumer Protection) of the Act which deals with unfair practices, provides private law rights against sellers, manufacturers and importers, and provides for product safety and information standards.

The function of the Consumer Affairs Division of the Attorney-General's Department is to advise the Minister on matters such as the operation of Part V of the Act, the banning of unsafe goods under the Act, the development of product safety and information standards under the Act, the development of voluntary product recall codes, uniform legislation proposals, the development of consumer education programs, the operation of a national consumer complaints statistics system, and on other developments in the economy affecting consumers. The National Consumers Affairs Advisory Council provides independent advice to the Minister on consumer affairs issues. The members of this Council have backgrounds in consumer affairs, industries, trade unions and government.

The Trade Practices Act, including its consumer protection provisions, is administered by a statutory authority, the Trade Practices Commission. It receives complaints from consumers but is primarily concerned with issues of national significance. The activities of the Trade Practices Commission are distinct from those of State and Territory consumer affairs agencies which administer their own legislation and provide the principal consumer complaint handling mechanisms.

Co-ordination of consumer affairs activities is undertaken by the Standing Committee of Consumer Affairs Ministers and through meetings of Officers of Consumer Affairs. There is also a Commonwealth/State Consumer Products Advisory Committee to provide a co-ordinated approach to product safety and information matters.

In addition to this, the Australian Federation of Consumer Organisations (AFCO) receives an annual grant under the Commonwealth's Grant-in-Aid Scheme. AFCO comprises a membership of 60 consumer and community groups and was set up with Commonwealth sponsorships to represent the consumer view to all levels of government and to industry.

### Legal Aid

The purpose of providing legal aid is to ensure that no person involved in a legal dispute or action should be without legal assistance by reason of not being able to pay for it, and is based on the notion of justice and equity before the law.

Legal aid in Australia is delivered through a variety of schemes operated at Federal, State and local levels. The principal schemes are those of the Australian Legal Aid Office, the legal aid commissions (which operate in five States and the Australian Capital Territory) and the Aboriginal legal services. In addition there are numerous community based legal aid agencies and certain law society schemes.

Historically, legal aid schemes in Australia were initiated by State governments with Public Solicitor or Public Defender schemes in Queensland, Victoria and New South Wales. The Law Society in South Australia began a legal assistance scheme in 1933, and law society schemes followed in other States. In 1973 the Australian Legal Aid Office was established to provide legal assistance in the Federal area.

It is now the policy of the Commonwealth Government that legal aid other than that given by Aboriginal legal services and voluntary and community agencies be provided in each State and Territory through a single independent statutory commission, established by State or Territory legislation. Under this policy, legal aid is provided by both salaried and private lawyers and funded by the Commonwealth in Federal matters. The States continue to fund legal assistance provided in relation to State matters. Pursuant to agreements entered into between the Commonwealth and the States, independent statutory commissions providing legal advice and assistance in both Commonwealth and State matters have been established in Queensland, South Australia, Victoria, Western Australia and the Australian Capital Territory. A statutory commission has also been established in New South Wales, but its functions do not extend to Commonwealth matters. Legal aid commissions have not yet been established in Tasmania and the Northern Territory, and in these places, as well as New South Wales, the Australian Legal Aid Office continues to provide legal advice and assistance in Commonwealth matters.

Aboriginal legal services operate in all States and Territories and are funded by the Department of Aboriginal Affairs. Community law centres which also operate in most States are funded by Commonwealth, State and in some instances local government.

The Commonwealth Attorney-General administers a growing area of legal assistance in special federal areas outside the scheme of independent statutory commissions. This assistance is provided under various Commonwealth Acts (such as the *Conciliation and Arbitration Act 1904*, *Administrative Appeals Tribunal Act 1975* and the *Trade Practices Act 1974*)

and administrative schemes (e.g. aid for Public Interest and Test Cases and for cases involving the recovery of children removed overseas).

The Commonwealth Legal Aid Council, established pursuant to the *Commonwealth Legal Aid Act 1977* has the broad function of advising the Commonwealth Attorney-General on matters relating to the provision of Legal Aid in Australia. The Council Secretariat is located in the Australian Legal Aid Office Division of the Commonwealth Attorney-General's Department.

Selected details of the income and expenditure of major Australian Legal Aid schemes and further information on the operation of these schemes are available from Annual Reports of the Commonwealth Legal Aid Council and the Commonwealth Attorney-General's Department or by writing to the Secretary, Commonwealth Legal Aid Council, Attorney-General's Department, Barton, A.C.T. 2600.

## The Police

The primary duties of the police are the prevention and detection of crime, the protection of life and property, and the enforcement of law to maintain peace and good order. In addition, they may perform a variety of other duties in the service of the State, including the regulation of street traffic, acting as clerks of petty sessions, crown land bailiffs, foresters, mining wardens and inspectors under the Fisheries and various other Acts. With the exception of the Australian Federal Police, police forces in Australia are under the control of the State and Northern Territory Governments, but their members perform certain functions for the Commonwealth Government, such as registration of aliens, and in conjunction with the Australian Federal Police and other Commonwealth officers, they police various Commonwealth Acts and Regulations.

The Australian Federal Police was formed in October 1979 and has its headquarters in Canberra, with regional offices in each capital city and in a number of provincial towns and cities.

### Australian Federal Police (AFP)

The AFP is responsible for many types of law enforcement under Commonwealth law. This includes investigations of organised crime, illegal importation of drugs, corporate crime, frauds committed on the Commonwealth (for example, social security fraud), investigation of other criminal offences committed against the Commonwealth, terrorism and breaches of currency regulations, as well as safeguarding the interests of the Commonwealth.

In the Australian Capital Territory, the AFP provides a full range of general policing services including traffic control, special operations, search and rescue services and conventional crime investigations.

In 1984 the AFP assumed responsibility for the direction and co-ordination of Australia's coastal surveillance, response and enforcement. The Coastal Protection Unit has its Headquarters in Canberra, with regional offices in Broome, Darwin and Cairns.

The AFP also posts officers for duty overseas. Officers are located in liaison posts in Hong Kong, Manila, Singapore, Bangkok, Kuala Lumpur, Jakarta, London, Washington, Los Angeles, Wellington, Islamabad and at Interpol in Paris. These liaison officers play a vital role in the gathering and exchange of information. The Australian National Central Bureau of the International Police Organisation (ICPO—Interpol) in Australia is staffed by AFP officers as a service to all Australian law enforcement agencies. The AFP also has a contingent based in Cyprus as a component of the United Nations Peace-keeping Force, and officers serve as members of the Police Forces of the Australian Territories of Christmas Island and Norfolk Island.

### Police strengths

The active strengths of non-civilian police personnel in police forces in Australia are shown in the following table:

POLICE FORCES								
Year	AFP	N.S.W.	VIC.	QLD	S.A.	W.A.	TAS.	N.T.
At 30 June—								
1982 . . . . .	2,702	9,388	8,329	4,543	3,249	2,693	1,041	566
1983 . . . . .	2,811	9,797	8,499	4,869	3,297	2,824	1,006	634
1984 . . . . .	2,911	10,432	8,507	4,686	3,286	2,888	1,009	640

## Crime Statistics

### Crime Victims Survey 1983

During the period February 1983 to January 1984 the ABS conducted a household survey throughout Australia to obtain information about selected incidents of crime. Details of the purpose, methodology and main results of the survey appear in an article at the end of this chapter.

### Selected offences

Since 1964, the ABS has published a series of 'Selected Offences reported or becoming known to Police'. This series is provided by police, and is based as far as possible on definitions and procedural arrangements agreed to by police authorities for all States and Territories.

Graphs following show the number of offences reported or becoming known to police, including the Australian Federal Police, in Australia in each of the seven major categories included in the series.

### Drug offences

Australia ratified the Single Convention on Narcotic Drugs 1961 in December 1967, and the Protocol Amending the Single Convention on Narcotic Drugs on 22 December 1972. Australia is also a signatory to the Convention on Psychotropic Substances 1971.

As its name implies, the Single Convention of Narcotic Drugs covers only the so-called narcotic drugs including cannabis and its derivatives. The Convention on Psychotropic Substances recognises that there are other drugs of dependence, and imposes controls on substances such as hallucinogens, amphetamines, barbituates, tranquilisers, and a number of other sedatives and central nervous system stimulants.

Overall responsibility for law enforcement in Australia is shared between Federal, State and the Northern Territory Police Forces. Each police force is an independent organisation with jurisdiction over laws of its State or Territory. Each has a drug squad or squads staffed by selected officers with special training and ability to understand the complexities of drug abuse and drug trafficking. Drug laws incorporate the controls and penalties for offences required by international drug conventions. There is co-operation between Federal, State and Territory Governments, the various police forces and other agencies to combat the serious and growing threat posed by drug trafficking. The Australian Customs Service has responsibility for the enforcement of laws controlling the illicit importing and exporting of drugs.

The following table provides information about selected drug seizures by Federal agencies during the period 1977 through 1984.

SELECTED DRUG SEIZURES BY FEDERAL AGENCIES  
1977 to 1984

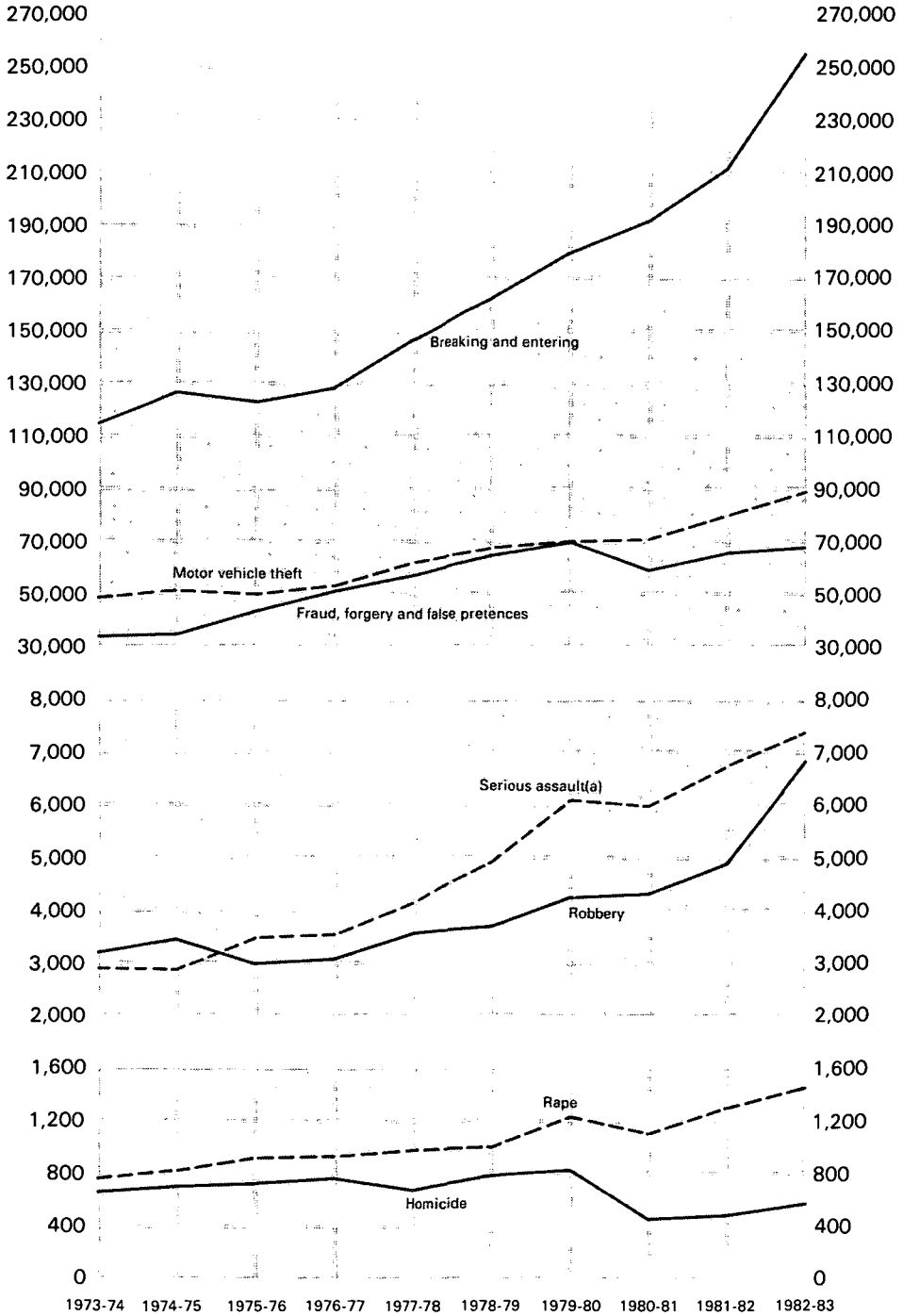
Types of drug (grams)	1977	1978	1979	1980	1981	1982	1983	1984(a)
Opium . . . . .	4,139.17	875.54	41.83	42.80	168.20	81.87	1,129.50	40.00
Heroin . . . . .	11,711.00	17,867.42	29,292.08	7,900.22	9,543.32	32,014.40	97,071.65	101,550.00
Cocaine . . . . .	133.55	—	177.90	6,964.20	310.80	8,924.87	8,797.49	13,100.00
Cannabis—all types(b)	741,212.63	7,745,781.06	608,280.74	689,288.75	1,731,675.30	2,530,066.37	1,725,455.28	6,912,860.00

(a) Subject to adjustment on receipt of analyst report.

(b) Excludes seizures of plants.

In April 1985 the Commonwealth, State and Territory Governments agreed that a National Campaign Against Drug Abuse should be launched as a co-operative effort, and that all Governments would devote additional resources to the task. It was accepted that the Campaign would focus particularly on the problems associated with illicit drugs. At the same time it was recognised that there are wide spread health and social problems arising from the abuse of licit drugs, and that the campaign would need to cover these as well. A document entitled 'A National Campaign Against Drug Abuse' is being prepared. The Ministerial Council On Drug Strategy was established to oversight the implementation of initiatives decided as part of the campaign.

**SELECTED OFFENCES REPORTED OR BECOMING KNOWN TO POLICE,  
AUSTRALIA, 1973- 74 TO 1982-83**



(a) From 1980-81 defined as assaults causing grievous or actual bodily harm.

## Correctional Treatment of Offenders

The term 'corrections' (and its derivatives) as used here refers to the treatment of offenders within the justice system.

While there is a variety in the types of correctional activities employed in each State and Territory, such activities can be broadly categorised into two groups:

- non-continuing forms of treatment, where, if the offender meets the requirements set by court, then correctional agencies would not normally become actively involved. Examples of these forms of treatment are fines, bonds, recognisances without supervision.
- continuing forms of treatment, where the offender is subject to some form of control by a correctional agency, usually for a specified period. This control may take the form of:
  - (i) full time custody, as in the case of persons detained in prisons, or other institutions, or
  - (ii) non-custodial treatment involving conditions to be observed by the offender, e.g. probation and parole. In recent years there has been a trend towards the greater use by courts of non-custodial treatment of offenders. This has seen the development of a range of programs such as periodic/weekend detention, attendance centre programs, and community service, under which the offender is at liberty in the community, but is required to report for weekend detention, training, counselling, or to perform unpaid work in the community.

Separate provisions exist in each State and Territory for the treatment of juvenile offenders, and courts and correctional agencies have a wide choice in the types of correctional treatments available to them. Both custodial and non-custodial correctional activities are employed, but greater flexibility allows treatment to be more closely aligned to individual requirements.

Each State and the Northern Territory operate prisons and other correctional services. Convicted adult prisoners from the A.C.T. serve their sentences in N.S.W. prisons, but local provision is made for the short-term custody of remand prisoners, and for probation and parole services. The Federal Government does not operate any prisons or other correctional services, and Federal offenders (i.e. persons convicted of offences under Federal laws) fall within the jurisdiction of State agencies for correctional purposes.

### National Prison Census

The Australian Institute of Criminology in conjunction with State prison administrators conducted the third National Prison Census at 30 June 1984.

NUMBER OF PRISONERS BY JURISDICTION, AGE<sup>(a)</sup> AND SEX, 30 JUNE 1984

Age-group	N.S.W.	Vic.	Qld	W.A.	S.A.	Tas	N.T.	A.C.T.	Total
Under 16 Years . . . . .	1	..	..	..	..	..	..	..	1
16 Years . . . . .	..	..	4	1	..	3	1	1	10
17 Years . . . . .	5	13	31	12	..	14	14	1	90
18 Years . . . . .	106	56	74	68	26	18	22	1	371
19 Years . . . . .	159	71	99	106	31	14	17	2	499
20-24 Years . . . . .	987	483	492	428	186	66	62	4	2,708
25-29 Years . . . . .	845	443	411	383	104	48	56	3	2,293
30-34 Years . . . . .	503	324	258	237	82	34	28	4	1,470
35-39 Years . . . . .	333	193	201	149	64	12	25	1	978
40-44 Years . . . . .	177	131	136	75	24	13	14	..	570
45-49 Years . . . . .	110	62	73	43	22	9	4	..	323
50-54 Years . . . . .	61	24	45	23	9	4	3	..	169
55-59 Years . . . . .	39	27	32	10	9	1	3	..	121
60-64 Years . . . . .	12	12	14	3	2	2	..	..	45
65 Years and Over . . . . .	8	6	7	4	4	1	..	..	30
Unknown . . . . .	8	..	4	1	1	2	..	..	16
<b>Total Persons . . . . .</b>	<b>3,354</b>	<b>1,845</b>	<b>1,881</b>	<b>1,543</b>	<b>564</b>	<b>241</b>	<b>249</b>	<b>17</b>	<b>9,694</b>
<b>Total Males . . . . .</b>	<b>3,188</b>	<b>1,784</b>	<b>1,841</b>	<b>1,464</b>	<b>549</b>	<b>235</b>	<b>237</b>	<b>16</b>	<b>9,314</b>
<b>Total Females . . . . .</b>	<b>166</b>	<b>61</b>	<b>40</b>	<b>79</b>	<b>15</b>	<b>6</b>	<b>12</b>	<b>1</b>	<b>380</b>

(a) The tabulation shows the age-structure of the prison populations as at 30 June 1984. The age at which persons normally become liable to imprisonment in an adult prison varies from State to State, being seventeen years in Victoria, Queensland, Tasmania and Northern Territory, and eighteen years in other jurisdictions, although younger persons who have been convicted of a particularly serious offence may also be sent to adult prisons. Persons in juvenile institutions were specifically excluded from this census.

(Source: Australian Institute of Criminology *Australian Prisoners 1984* by John Walker and David Biles).



## Criminological Research

### The Australian Institute of Criminology

The Australian Institute of Criminology, located in Canberra, was established as a statutory authority under the *Criminology Research Act 1971*. The Institute is administered by a Director and a Board of Management comprising three members appointed by the Federal Attorney-General, and three members representing the States, who are appointed by the Criminology Research Council.

Among the functions of the Institute as defined in the Criminology Research Act are:

- to conduct criminological research (i.e. research in connection with the causes, prevention and correction of criminal behaviour and related matters), and communicate the results of such research to the Commonwealth and States;
- to advise on the needs for, and programs of, criminological research, and give advice and assistance in relation to any research funded through the Criminology Research Council;
- to conduct seminars and courses of training and instruction for persons engaged in criminological research or work related to the prevention or correction of criminal behaviour;
- to provide advice in relation to the compilation of statistics in relation to crime; and
- publish material resulting from, or relating to its activities.

Since its inception the Institute has undertaken directly, or through the Criminology Research Council actively assisted and advised on, an extensive range of criminological research projects, and has conducted, or been represented at, numerous national and international conferences dealing with crime related matters. In addition, the Institute maintains a comprehensive library of criminological material which is available to researchers and criminal justice practitioners.

Major publications of the Institute during 1984-85 included *Australian Prisoners 1984* by John Walker and David Biles, *Occupational Health and Safety Enforcement in Australia* by John Braithwaite and Peter Grabosky, *Crime and Punishment in the Colonies* by S. Mukherjee, J. Walker and E. Jacobsen, *Administration of Criminal Justice in the A.C.T.* edited by Richard Harding, *Prosecutorial Discretion* edited by Ivan Potas, and *Prisons in Paradise* edited by Jack Sandry and Marjorie Johnson.

### The Criminology Research Council

The Criminology Research Council, comprised of representatives from the Commonwealth and each State, is an independent body corporate also established under the *Criminology Research Act 1971*. The Council is responsible for the control and administration of the Criminology Research Fund, which is funded fifty percent by the Federal Government, and fifty percent by State Governments on a pro-rata population basis. Subject to the Council's assessment of a project, persons seeking to conduct criminological or related research may be provided with a grant from the fund.

Since its establishment the Council has provided grants for over 100 separate research projects covering nearly all aspects of crime and criminal justice in Australia. Council-funded research is generally located in specific regions and may involve primary data gathering. By contrast, the research undertaken by the Institute itself is generally national and comparative in nature and makes use of existing data sources.

## Bankruptcy and Copyright

### Bankruptcy

For the description of the provisions of the *Bankruptcy Act 1966*, see Year Book No. 55, pages 586-7. The Act was amended in 1970 to remove any obstacle the Act might present to the operation of compositions or schemes of arrangements entered into under State or Territory legislation providing assistance to farmers in respect of their debts. Details for each Australian State have been published in the Annual Report by the Minister for Consumer and Business Affairs on the operation of the Act.

### Copyright

Copyright is regulated by the Commonwealth *Copyright Act 1968* which came into force on 1 May 1969. The Act does not contain any provisions requiring or enabling the completion of formalities (such as publication, registration or the payment of fees) in order to obtain

copyright protection in Australia. Protection is granted automatically from the moment of making a work or other subject matter.

The Act has been amended from time to time. The *Copyright Amendment Act 1980*, in particular, contains substantial changes in a number of areas including fair dealings, copying by libraries and archives, and copying for educational purposes and for handicapped readers.

Copyright is administered by the Attorney-General's Department.

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# 1983 CRIME VICTIMS SURVEY

## Introduction

Between March and May 1975 the Australian Bureau of Statistics conducted a survey on crime victimisation as part of the General Social Survey of households and persons. Results from the survey were published in *General Social Survey, Crime Victims, May 1975* (ABS Catalogue No. 4105.0—now out of print). Summary results were published in the 1980 Year Book.

During the period February 1983 to January 1984, the ABS conducted the 1983 Crime Victims Survey throughout Australia to obtain information about incidents of selected crime offences of which households and individuals had been the victim in the twelve months preceding the date of the interview. The term "incident" refers to one occurrence of a particular offence. The Survey covered 18,000 households and 37,000 persons.

Details were obtained about the last incidents of victimisations recorded for break and enter and household property theft (which were regarded as household offences), and for motor vehicle theft, robbery, other theft, sexual assault and assault (which were regarded as personal offences).

## Main purposes

The main purposes of the survey were to:

- provide a measure of selected types of crime against private individuals and households;
- obtain information about victims;
- identify high risk potential victims;
- assess the extent of reporting of crime to the police; and
- provide information on reasons for reporting or not reporting crimes to the police.

## Methodology

Trained interviewers conducted personal interviews with all members of the selected households aged 15 years and over in respect of the selected personal offences. Information about sexual assault was obtained only from female members of the household aged 18 years and over. Additionally, one adult member of each household was asked to provide information about offences against household property, including break and enter.

## Data collected

Data was collected covering a wide range of topics relevant to aspects of victimisations. These included the circumstances of each type of crime to determine the seriousness, injury and loss, the location and time of particular incidents, the known characteristics of the offender, whether the matter was reported to the police and the reasons why it was or was not reported.

## Importance of the survey

The Crime Victims Survey is valuable as an alternative source of measures of crime to that available from official administrative statistics on crime—particularly that crime which is not reported to the police and which can only be investigated by a household survey. The reasons why particular offences are not reported to the police can highlight areas in police or judicial procedures which may require improvement. Additionally, the survey methodology provides personal data on victims and the circumstances of their victimisation which are not usually available from administrative statistics.

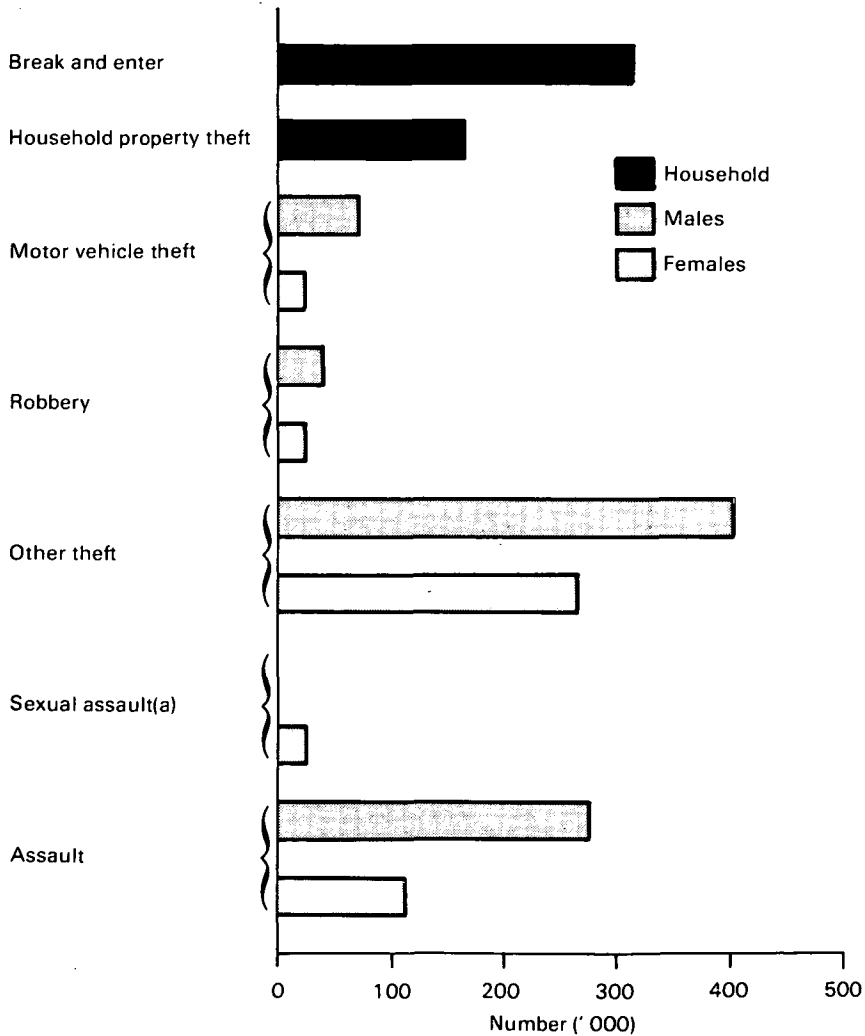
The major users of the data are the Australian Law Reform Commission, the Australian Institute of Criminology, the relevant State Government Departments and Authorities, Commonwealth Legal Aid Commission, the Australian Federal Police, State Police Departments and various academic and research organisations. Victim support schemes and State welfare agencies also require information on victims and the consequences of victimisation.

## Main results

The Survey estimates that in the twelve months prior to interview, 89 per thousand households in Australia experienced a household crime and 98 per thousand persons suffered

a personal crime. The number of persons who were victims of each type of personal offence and the number of households who were victims of either household offences are shown in Plate XX. Each household or person is counted once only for each offence regardless of the number of incidents recorded for each offence. In the total victims count, each victim is counted once only regardless of how many offences he/she or the household recorded.

**NUMBER OF VICTIMS OF SELECTED OFFENCES FOR HOUSEHOLD VICTIMS AND BY SEX OF VICTIM FOR PERSONAL OFFENCES**



(a) Questions on sexual assault were asked only of females aged 18 years and over.

**PLATE 33**

**Personal victims**

The lowest victimisation rate (57 victims per thousand of the population aged fifteen years and over) was recorded for incidents occurring in Tasmania. The highest rate (135 victims per thousand of the population) was recorded for Northern Territory incidents.

Victims in the 15-19 and 20-24 age ranges showed the highest victimisation rates of all age groups. In general, victimisation rates declined steadily as age group increased.

Nearly twice as many males as females reported having been a victim of an offence (63 per cent of all personal victims were male). Never married, separated and divorced males and separated females were the most victimised groups while married and widowed females recorded the lowest victimisation rate.

People born in New Zealand recorded being victimised at almost twice the rate of everyone included in the survey. People born in Italy recorded being a victim least frequently.

The unemployed reported being victimised twice as often as the average person. People 'not in the labour force' were only 60% as likely to be victimised as the average person.

Victims of crimes involving violence or threatened violence were much more likely to have been victimised on more than one occasion than were victims of crimes not involving violence. 41 per cent of victims of assault, 38 per cent of victims of robbery and 40 per cent of victims of sexual assault reported that they had been a victim of that offence two or more times in the preceding twelve months.

For offences involving violence or threatened violence, the offenders were more likely to be male than female: almost nine out of ten victims were threatened or attacked by one or more male offenders and, of the remainder, one in three were attacked by both male and female offenders.

Males not in the labour force were the least likely of all employment status groups to report crimes while employed males were the most likely. Of all employment status groups, unemployed females were the most likely to state that "police couldn't or wouldn't do anything about it" as a main reason for not reporting the last incident.

*Theft victims*

Victims of theft, including the household offences of break and enter and household property theft, recorded that no property was recovered in 88 per cent of incidents in which property was stolen. Where cash was stolen, 70 per cent involved amounts of less than \$100. Only 4 per cent of recorded incidents of stolen cash involved amounts greater than \$500.

*All crime victims*

Whether the police were notified of the offence depended on its nature—94 per cent of motor vehicle thefts, 69 per cent of break and enters and 25 per cent of sexual assaults (this category is more extensive than rape or attempted rape) were reported to the police. For details on all offences see the first table.

One out of two victims (49%) reported at least one incident to the police and 56 per cent did not report one or more incidents. (These figures do not total to 100% because some victims with more than one recorded incident informed the police of at least one, but not of another). Of those victims not reporting one or more incidents, half the incidents were not reported mainly because the offence was considered "too trivial or unimportant". The most frequently recorded main reason for telling the police was "to try or hoped to get property back". The percentage distribution of the main reason for notifying and not notifying the police are given in the second table.

For victims of violence or threatened violence, the main reason recorded was "to try to stop it happening again".

## NUMBER OF INCIDENTS AND WHETHER REPORTED TO POLICE

	Number of incidents	Reported to police		Not stated
		Yes	No	
	('000)	%	%	%
Break and enter . . . . .	315.4	68.6	30.6	0.8
Household property theft . . . . .	166.5	36.9	63.1	..
Motor vehicle theft . . . . .	95.2	94.1	5.9	..
Robbery . . . . .	65.3	42.6	57.4	..
Other theft . . . . .	673.3	38.4	61.6	..
Sexual assault(a) . . . . .	26.7	24.7	71.6	3.8
Assault . . . . .	390.9	33.6	66.4	..

(a) asked only of females aged 18 years and over.

## MAIN REASON GIVEN FOR NOTIFYING AND NOT NOTIFYING THE POLICE OF EACH LAST INCIDENT

	Per cent
<b>why police told</b>	
To try/hoped to get property back . . . . .	15.4
Because crime committed/moral obligation . . . . .	11.2
Because it was one of a number of incidents/to try to stop it happening again . . . . .	5.3
Because of insurance/compensation . . . . .	3.6
Wanted offender caught/punished . . . . .	2.9
Fear of harm to self or another person . . . . .	1.7
Other . . . . .	2.2
<b>Subtotal (a): incidents reported by any household member . . . . .</b>	<b>41.0</b>
Incidents reported to police but not by any household member . . . . .	9.0
<b>Subtotal (a): police aware of incident . . . . .</b>	<b>49.4</b>
<b>why police not told</b>	
Too trivial/unimportant . . . . .	28.6
Police couldn't or wouldn't do anything about it . . . . .	11.6
Private matter/would take care of it themselves . . . . .	6.6
Told someone else instead . . . . .	3.0
Afraid of reprisal . . . . .	1.1
Offender thought/known to be a child . . . . .	0.8
Too confused/upset/injured . . . . .	0.7
Did not want offender punished . . . . .	0.6
Because someone else did . . . . .	(b)0.1
Other . . . . .	7.0
<b>Subtotal (a): police not aware of incident . . . . .</b>	<b>56.3</b>
<b>Total (a) . . . . .</b>	<b>100.0</b>

(a) Totals may be less than the sum of the components since persons could have been victims of more than one offence, have taken different actions and/or have recorded different reasons for their actions. (b) This figure is subject to high standard error and is therefore unreliable

## Detailed results

Further information is contained in two ABS publications; Victims of Crime, Australia, 1983, Summary (Cat. No. 4506.0) and Crime Victims Survey, Australia, 1983, Preliminary (Cat. No. 4505.0).

## CHAPTER 12

### EDUCATION AND YOUTH AFFAIRS

#### EDUCATION

##### **State and Commonwealth Government responsibilities in education**

The governments of the six Australian States and the Northern Territory have the major responsibility for education, including the administration and substantial funding of primary, secondary and technical and further education. The Commonwealth Government is directly responsible for education services in the Australian Capital Territory, administered through an education authority, and for services to Norfolk Island, Christmas Island and the Cocos (Keeling) Islands. The Commonwealth Government provides supplementary finance to the States and is responsible for the total funding of universities and colleges of advanced education. Apart from its financial role, the Commonwealth is involved in initiating and co-ordinating policy and in maintaining a national perspective.

The State Governments administer their own systems of primary, secondary and technical and further education through government departments responsible to State Ministers. In three States, a single Education Department is responsible for these three levels of education. In New South Wales and South Australia, there is a separate department responsible for technical and further education. In Victoria, the Education Department's former responsibility for technical and further education has passed to a Post-Secondary Technical and Further Education Board. In New South Wales the Education Commission advises the Minister on primary, secondary and further education.

Detailed information on the education systems of the States may be found in the respective State year books. Chapter 27 of this Year Book provides details of the situation in the Territories.

##### **Administrative structure of education at the national level**

As mentioned above, the Commonwealth Government has direct responsibility for education only in the Australian Capital Territory and the external Territories. The Commonwealth Government, however, has special responsibilities for the Aboriginal people and for migrants, as well as the power to provide assistance for students. Moreover, the Commonwealth Government is responsible for international relations in education. In December 1984, the former Department of Education and Youth Affairs became the Commonwealth Department of Education. The Department's activities include the administration of schemes of student assistance, international education, some aspects of migrant education, language policy and Aboriginal education policy. In September 1985, administration of the Commonwealth Schools Commission's general recurrent and capital programs were also transferred to the Commonwealth Department of Education. The Department also liaises with the media and community groups and produces a range of publications relating to education in Australia. Selected publications are listed at the end of this chapter.

The Australian Constitution empowers the Commonwealth Government to make grants to the States and to place conditions upon such grants. This power has been used to provide financial assistance to the States specifically for educational purposes. There are two national education commissions which advise the Commonwealth Government on the needs of educational institutions throughout Australia for the purposes of financial assistance: the Commonwealth Schools Commission and the Commonwealth Tertiary Education Commission, which comprises a Commission concerned with co-ordination and inter-sectoral matters, and three Councils on universities, advanced education and technical and further education.

Generally, the Commissions are required to consult with State authorities (and, in the case of the Commonwealth Schools Commission, with the authorities conducting non-government schools) and such other persons, bodies and authorities as they think necessary before making recommendations to the Commonwealth Government on the amount of

financial assistance required, both in general and for specific purposes, to meet the needs of each sector.

The *National Aboriginal Education Committee* (NAEC) is the principal adviser to the Minister for Education and the Commonwealth Government on all matters concerning Aboriginal education. The Committee has responsibility for providing advice on the educational needs of Aboriginal and Torres Strait Islander people and appropriate methods of meeting those needs. This involves responsibility for monitoring existing policy and programs, developing new policy and programs, and for promoting and undertaking investigations, reviews and studies. The NAEC maintains close links with State Aboriginal Education Consultative Groups as the basis for providing advice to Government.

Commonwealth Government education authorities also function as co-ordinating agencies for joint activity by the States and Territories in a number of fields. For example, the *Australian Council on Awards in Advanced Education* seeks, in consultation with State co-ordinating bodies, to establish consistency in awards in advanced education by establishing, maintaining and publishing a register of such awards.

A number of bodies at the national level have an important co-ordinating, planning or funding role.

- The *Australian Education Council*, is the Commonwealth and State Ministers for Education, and normally meets three times in each two years as a consultative body to consider matters of mutual interest, such as the material and personnel needs of schools and co-operation in educational developments generally. It is assisted by a Standing Committee including the Directors-General of Education in each State and the Secretary of the Commonwealth Department of Education.
- The *Conference of the Directors-General of Education* normally meets twice each year. Matters discussed and decisions reached at the Conference have a direct influence in each State and Territory on such matters as pre-service and in-service education of teachers, school staffing, curricula, special education, building programs, administrative procedures and the extent of uniformity and diversity between education systems. Under the auspices of the Directors-General Conference, regular meetings of senior specialist personnel are held.
- The *Australian Council for Educational Research* (ACER) is an independent national research organisation. The Council is funded by annual grants from each of the State and Northern Territory Governments and the Commonwealth Government, as well as from its own activities. The Council is involved in its own and contract research in co-operation with education systems and plays a central role in the areas of educational measurement and evaluation as well as research into learning and teaching and in the social context of education. The ACER acts as the Australian national centre for the program of international surveys of student achievement. Authority for ACER's policy rests with its governing council.

There are also a number of non-government organisations which have a co-ordinating role in education at the national level. These include the *National Catholic Education Commission*, the *National Council for Independent Schools*, the *Australian Vice-Chancellors' Committee*, the *Australian Committee of Directors and Principals of Colleges of Advanced Education*, the *Conference of Directors of TAFE* and the *Australian High School Principals' Association*.

#### STUDENT ASSISTANCE SCHEMES FUNDED BY THE DEPARTMENT OF EDUCATION

Scheme	Number of	Expenditure
	students 1984	(\$'000) 1984-1985
Postgraduate Awards(a) . . . . .	2,218	17,713
Tertiary Education Assistance(a) . . . . .	85,893	262,129
Secondary Allowances(a) . . . . .	55,527	63,145
Adult Secondary Education Assistance(a) . . . . .	2,585	8,358
Aboriginal Secondary Grants(a) . . . . .	19,834	28,818
Aboriginal Study Grants(b) . . . . .	n.a.	25,160
Aboriginal Study Grants—Overseas(b) . . . . .	10	206
Assistance for Isolated Children(b) . . . . .	19,365	22,655
Non-State Tertiary Institutions . . . . .	n.a.	276

(a) For this scheme, the 'number of students' represents students receiving benefits at 30 June 1984. (b) For this scheme, the 'number of students' represents students receiving benefits by 30 June 1984.



### New developments in education

1985 saw the first year of the Commonwealth's new general recurrent funding arrangements for government and non-government schools. These new arrangements will provide stability and long-term security for both sectors by the provision of significant increases in funding over an eight-year period to 1992. Grants for the four years 1985 to 1988 have been included in legislation.

In 1985, the Government announced that it had accepted the major recommendations of the report of the Quality of Education Review Committee, chaired by Professor Peter Karmel. Implementation of these recommendations will provide a new direction in Commonwealth involvement in schools. In accordance with the Committee's recommendations, the Commonwealth will focus on the priority areas in schooling outlined by the Committee. These include:

- the importance of primary education, particularly junior primary, as a foundation for future learning;
- raising participation in Years 11 and 12 by disadvantaged groups;
- improving representation and attainment of girls in major subject areas; and
- assisting teachers to bring about the necessary improvements.

In 1985, the Commonwealth also adopted new arrangements for the planning and funding of new non-government schools. These arrangements are designed to provide for the orderly development of non-government schools without seriously reducing standards of service in existing government and non-government schools.



Tasmanian primary school students 'talk' by computer to a school in another part of the State. All 600 government schools in Tasmania are linked by computer, allowing immediate exchange of information on any subject.

*Australian Information Service*

As an extension of concern about inequity in schooling in 1985, the government introduced a new *Basic Learning in Primary Schools Program*, to ensure that students had a proper foundation for successful secondary studies.

Through the Commonwealth Schools Commission *Participation and Equity Program* and projects of national significance, the Government will be supporting the work of State and Territory Aboriginal education consultative groups, and stimulating projects related to Aboriginal education. A sub-committee of the Curriculum Development Centre Council—the Aboriginal Education Advisory Committee—has been appointed to advise CDC council on the future directions of program development and the merit of programs submitted with regard to Aboriginal education.

In 1985 the Commonwealth Schools Commission assumed responsibilities from the Department of Community Services' Office of Child Care for special education for disabled children below school age.

### **Pre-school education**

All States and Territories except one have a policy of making pre-school education universal for children in the years prior to school entry. A majority of the States and Territories have made considerable progress towards this goal. Most pre-schools are conducted on a sessional basis (i.e., sessions of two to three hours for two to five days per week). Pre-school programs generally favour the free play approach with emphasis on children's social and emotional development through creative activities. Parents often contribute by assisting at some sessions or by the purchase of play materials and educational resources. Attendance fees are not usually charged in those States where pre-schools are government-run, but in others, fees may be payable to private or voluntary organisations.

### **Primary and secondary education**

#### **Compulsory education**

School attendance is compulsory throughout Australia between the ages of 6 and 15 years (16 years in Tasmania). Each State or Territory has its own specific requirements. The majority of children commence primary school at about 5 years of age, except in Western Australia, where they start at 6 years. Primary schooling generally begins with a preparatory or kindergarten year, followed by 12 grades to complete a full secondary course of study. While the final two years of schooling fall outside the compulsory stage of education, nearly two-thirds of students remain at school until Year 11 and 45 per cent remain until Year 12. The proportion of students continuing to the final years of schooling has increased significantly since 1981.

#### **Non-Government Schools**

All children between the prescribed ages must attend either a government school or some other recognised educational institution. While the majority of Australian children attend government schools, about one in four attend non-government schools at some stage of their school life. In the last few years enrolments in the non-government sector have increased to 757,169 in 1984, i.e. more than 25 per cent of all school enrolments. Non-government schools operate under conditions determined by government authorities, usually registration boards, in each State and Territory. These conditions require that minimum education standards are met and that the schools have satisfactory premises. The majority of non-government schools are Catholic and there is a Catholic Education Commission in each State and at the national level. Most other non-government schools are under the auspices of, or run by, other religious denominations. The capacity of the Commonwealth Government to assist with the cost of educating children in denominational schools throughout Australia was upheld by the High Court in 1981.

#### **Funding of schools**

Primary and secondary education is free in government schools in all States and Territories. Fees for the hire of text books and other school equipment, however, may be charged, particularly in secondary schools. Most State Governments provide financial assistance to parents under specified conditions for educational expenses. Assistance includes various types of scholarships, bursaries, transport and boarding allowances, many of which are intended to assist low-income families. The Commonwealth Government also provides a number of schemes of assistance to facilitate access to education. The *Secondary Allowances Scheme*

(SAS), which assists families on lower incomes to maintain their children in Years 11 and 12, has been considerably expanded recently; the allowance is to rise by more than 50 per cent in 1986 (following a 15 per cent rise in 1985) and the number of students assisted is projected to increase to 78,000 (from 66,000 in 1985). This scheme and others are listed in the statistical table dealing with Student Assistance Schemes. In addition some non-government schools offer scholarships and bursaries to assist students.

State Governments provide the bulk of funds for government schools out of general revenue and make per capita grants to non-government schools. About one-fifth of the total public funding of schools is now provided directly by the Commonwealth through the Commonwealth Schools Commission, which, in consultation with the States, advises the Commonwealth Government on the resource needs of both government and non-government schools. For further details, *see* Expenditure on education at the end of this section.

### **School organisation and operation**

Primary schooling provides a general elementary program lasting for 7 or 8 years until Years 6 or 7. Students enter secondary schools at Year 7 in some State systems and at Year 8 in others. Secondary education is generally comprehensive and co-educational. Most students attend schools reasonably near to their homes. Usually primary and secondary schools are separate institutions, but in some country areas there are area or central schools which provide both forms of schooling. Non-government schools follow a similar pattern, but a significant though declining proportion are single sex institutions. In Tasmania and the Australian Capital Territory, attendance for the final two years of government schooling is at separate secondary colleges.

Generally, schools in Australia have a considerable degree of autonomy. Most State Departments have established regional administrations which are responsible for matters such as planning school buildings and deploying staff while a central curriculum unit provides general guidelines on course planning. In general, individual schools determine teaching and learning approaches within the guidelines and offer options within resources available and the attitudes and interests of students. Some systems encourage school-based curriculum development and, in the case of the Australian Capital Territory, school-based assessment in place of external examinations. While schools usually have a parents' association, there has been encouragement of greater community participation in general decision-making at school level in some systems through parent representation on school councils and boards.

Specialist services and programs provided in schools include educational or vocational counselling by a permanent or visiting teacher, English as a Second Language program by specialist teachers (especially in schools with significant numbers of children from non-English speaking backgrounds), special programs designed to assist Aboriginal school children (including the widespread use of Aboriginal teacher aides and bilingual education programs in communities where the children's first language is an Aboriginal language), a variety of programs for gifted and talented children and remedial assistance for children with learning difficulties.

### **Primary education**

In the lower primary years the main emphasis is on the development of basic language and literacy skills, simple arithmetic, moral and social education, health training and some creative activities.

In the upper primary years there is development of the skills learned in the earlier years. English, mathematics, social studies, science, music, art and craft, physical education and health are studied. There are also optional subjects such as religious instruction and, in some schools, foreign and community languages and instrumental music.

Students in Australian primary schools usually have only one teacher for all subjects, and are promoted each year on the basis of completing the previous year, rather than on achievement. In schools where open plan learning styles have been adopted, the method of team teaching (more than one teacher to a class) and multi-age grouping of students is often practised.

### **Secondary education**

In some systems the first one or two years of secondary school consist of a general program which is followed by all students, although there may be some electives. In later years a basic core of subjects is retained with students being able to select additional optional subjects. In other systems students select options from the beginning of secondary school.

The core subjects in all systems are English, mathematics, science and, usually, a humanities or social science subject. Optional subjects may include, for example, a foreign language, a further humanities or social science subject, commerce, art, crafts, music, home economics, a manual arts subject, agriculture, physical education or health education. Some schools offer optional courses in subjects such as consumer education, conversational foreign languages, shorthand, typewriting, road safety, drama and leisure-time activities.

In senior secondary years a wider range of options is available in the larger schools and there is an increasing trend towards encouraging individual schools to develop courses suited to the needs and interests of their students, subject to accreditation and moderation procedures.

Victoria is the only State which retains a system of secondary technical education. These schools offer a wide range of elective technical subjects. In the Northern Territory two Aboriginal residential colleges assist Aboriginals to participate in secondary education.

Students in Australian secondary schools generally have different teachers for each separate subject area, though, like primary schools, variations may occur where open planned or more flexible methods have been adopted. Promotion is, again, generally chronological, but students may be grouped according to ability after an initial period in unstreamed classes.

Examinations and assessment at each level are carried out by individual schools except Year 12 in the systems which have retained external examinations at Year 12 level. Students attaining the minimum school leaving age may leave school and seek employment, or enrol in a vocationally oriented course in a technical and further education (TAFE) institution or a private business college. For many TAFE courses, completion of Year 10 of secondary school is a minimum entry requirement. For those continuing to the end of secondary school (Year 12), opportunities for further study are available in TAFE institutions, universities, colleges of advanced education and other post-school institutions. The latter include non-government teachers colleges and a few single purpose institutions such as the Australian Film and Television School, the Australian Maritime College and the National Institute of Dramatic Art.

Students' eligibility for entry to universities and colleges of advanced education is assessed during, or at the end of, the final two years of secondary schooling. Five States and the Northern Territory use different combinations of school assessment and public examinations. In Queensland and the Australian Capital Territory eligibility to enter higher education is determined from moderated and standardised school assessments. Several education systems are currently reviewing their senior secondary school assessment procedures.

#### **Other schooling arrangements**

Children may be exempted from the requirement of compulsory attendance if they live too far from a school or suffer a physical disability. These children usually receive correspondence tuition. Special schools are available in larger centres for socially, physically and mentally handicapped children in cases where they are not catered for in special or regular classes in ordinary schools.

In addition to correspondence tuition there are other provisions for children in isolated areas. Schools of the Air operate in New South Wales, South Australia, Queensland, Western Australia and the Northern Territory. Schooling for the children of Aboriginal groups in remote areas of the Northern Territory is conducted by Aboriginal teaching assistants supported by visiting teachers from established schools.

Special education is provided by State Governments and non-government authorities in specialist schools, in special classes or units in regular schools or by withdrawal from regular classes for periods of intensive assistance by special staff. In all States and particularly in New South Wales, Queensland and Victoria, parents have formed voluntary organisations to establish additional schools catering for their childrens' special needs. The Commonwealth Government, through the Commonwealth Schools Commission, provides funds to State authorities to assist in the upgrading of special education facilities.

Boarding facilities are available at some non-government schools mainly in the larger towns and cities. A small number of government schools, in particular those catering for special groups such as Aboriginals, have residential hostels close by.

## SCHOOLS, STUDENTS AND TEACHERS BY CATEGORY OF SCHOOL, AUSTRALIA, 1984

	Government schools	Non-government schools			Total	All schools
		Catholic	Anglican	Other		
Number of schools . . . . .	7,544	1,705	104	672	2,481(a)	10,025
Number of students—						
Males . . . . .	1,162,979	283,627	36,225	59,893	379,745	1,542,724
Females . . . . .	1,097,572	282,950	30,301	64,173	377,424	1,474,996
Persons . . . . .	2,260,551	566,577	66,526	124,066	757,169	3,017,720
FTE of teachers(b)—						
Males . . . . .	63,772	10,427	2,234	3,704	16,365	80,137
Females . . . . .	84,788	20,866	2,327	5,239	28,432	113,220
Persons . . . . .	148,560	31,293	4,561	8,943	44,797	193,357

(a) Includes a number of special schools in Victoria and Western Australia not previously included in the non-government collection.

(b) Full-time teaching staff plus full-time equivalents of part-time teaching staff.

## STUDENTS BY CATEGORY OF SCHOOL AND SEX, AUSTRALIA, 1979 to 1984

	1979	1980	1981	1982(a)	1983(a)	1984(b)
GOVERNMENT SCHOOLS						
Males . . . . .	1,201,127	1,189,633	1,179,428	1,171,506	1,173,036	1,162,979
Females . . . . .	1,135,591	1,128,444	1,119,975	1,111,459	1,107,986	1,097,572
Persons . . . . .	2,336,718	2,318,077	2,299,403	2,282,965	2,281,022	2,260,551
NON-GOVERNMENT SCHOOLS						
Males . . . . .	324,223	332,930	344,017	355,964	368,321	379,745
Females . . . . .	325,990	333,555	343,979	355,718	366,463	377,424
Persons . . . . .	650,213	666,485	687,996	711,682	734,784	757,169
SCHOOLS						
Males . . . . .	1,525,350	1,522,563	1,523,445	(a)	(a)	1,542,724
Females . . . . .	1,461,581	1,461,999	1,463,954	(a)	(a)	1,474,996
Persons . . . . .	2,986,931	2,984,562	2,987,399	(a)	(a)	3,017,720

(a) The government and non-government school sectors have not been totalled for 1982 and 1983 as the government statistics for 1982 and 1983 vary in scope and coverage. They are not comparable with either the non-government sector for 1982 and 1983 or the government and the non-government sectors for the years 1979 to 1981.

(b) The non-government school statistics for 1984 are comparable with the government series in this table for the years 1982 to 1984 but not with the government series prior to 1982 or the non-government series prior to 1984. For further details see *National Schools Statistics Collection, Australia 1984* (4221.0).

## GOVERNMENT SCHOOLS: STUDENTS, BY AGE AND SEX, 1984

(July school census)

Age last birthday (years)	Australia									Males	Females	Persons
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.				
Under 6 . . . . .	58,976	38,415	16,501	14,264	8,588	3,183	1,677	2,852	73,656	70,800	144,456	
6 . . . . .	60,499	43,079	31,207	15,707	18,321	5,495	2,157	3,031	92,565	86,931	179,496	
7 . . . . .	60,738	43,319	32,125	15,605	18,000	5,517	2,277	3,111	93,137	87,555	180,692	
8 . . . . .	61,620	44,332	32,506	16,044	18,520	5,644	2,328	3,009	94,621	89,382	184,003	
9 . . . . .	63,937	45,811	33,913	16,627	18,502	5,889	2,326	3,210	97,961	92,254	190,215	
10 . . . . .	65,657	47,966	34,821	16,983	18,768	5,963	2,343	3,235	100,826	94,910	195,736	
11 . . . . .	68,791	49,619	36,379	18,032	19,423	6,293	2,290	3,235	104,846	99,216	204,062	
12 . . . . .	70,443	50,367	36,119	18,391	20,481	6,392	2,278	3,246	107,191	100,526	207,717	
13 . . . . .	70,182	52,384	35,174	18,951	19,917	6,559	2,211	3,370	107,440	101,308	208,748	
14 . . . . .	64,522	49,939	33,074	18,350	18,759	6,310	1,976	3,148	101,477	94,601	196,078	
15 . . . . .	59,308	46,924	25,902	16,058	15,368	6,084	1,621	2,801	89,908	84,158	174,066	
16 . . . . .	36,427	35,910	16,558	10,902	8,985	2,639	1,017	2,478	58,847	56,069	114,916	
17 . . . . .	23,142	18,843	7,574	4,097	3,989	1,300	459	2,027	30,091	31,340	61,431	
18 . . . . .	5,453	3,731	1,299	775	662	256	112	659	7,196	5,751	12,947	
19 and over(a) . . . . .	1,038	1,974	985	434	816	263	138	340	3,217	2,771	5,988	
<b>Total all ages . . . . .</b>	<b>770,733</b>	<b>572,613</b>	<b>374,137</b>	<b>201,220</b>	<b>209,099</b>	<b>67,787</b>	<b>25,210</b>	<b>39,752</b>	<b>1,162,979</b>	<b>1,097,572</b>	<b>2,260,551</b>	

(a) Students whose ages were unspecified have been included in the 19 years and over age group.

Note: Non-government student statistics are not available by age for 1984.

**STUDENTS BY CATEGORY OF SCHOOL, SEX AND YEAR OF EDUCATION, AUSTRALIA, 1984**  
(July school census)

Year of education	Government schools	Non-government schools				All schools		
		Catholic	Anglican	Other	Total	Males	Females	Persons
<b>Primary—</b>								
Pre-year 1 (a)	115,425	34,907	1,607	4,703	41,217	80,406	76,236	156,642
Year 1	186,549	45,125	1,942	6,283	53,350	124,204	115,695	239,899
Year 2	183,113	44,512	1,956	6,047	52,515	121,228	114,400	235,628
Year 3	183,539	45,431	2,222	6,287	53,940	121,697	115,782	237,479
Year 4	188,731	46,969	2,675	6,557	56,201	125,735	119,197	244,932
Year 5	194,541	48,651	3,407	7,248	59,306	130,442	123,405	253,847
Year 6	201,512	49,514	4,041	7,718	61,273	134,571	128,214	262,785
Year 7 (b)	77,520	14,829	1,522	2,803	19,154	49,553	47,121	96,674
Ungraded special	8,989	374	26	960	1,360	6,444	3,905	10,349
Ungraded non-special	7,272(c)	83	1	1,490	1,574	5,265	3,581	8,846
<b>Total primary</b>	<b>1,347,191</b>	<b>330,395</b>	<b>19,399</b>	<b>50,096</b>	<b>399,890</b>	<b>899,545</b>	<b>847,536</b>	<b>1,747,081</b>
<b>Secondary—</b>								
Year 7 (d)	129,992	35,216	6,387	9,101	50,704	91,905	88,791	180,696
Year 8	206,040	50,699	8,949	14,659	74,307	142,859	137,488	280,347
Year 9	194,373	48,320	8,824	13,581	70,725	135,394	129,704	265,098
Year 10	180,106	45,460	8,603	12,476	66,539	125,088	121,557	246,645
Year 11	113,547	31,758	7,749	11,166	50,673	81,514	82,706	164,220
Year 12	71,022	23,758	6,550	9,132	39,440	52,696	57,766	110,462
Ungraded special	2,670	371	22	577	970	2,197	1,443	3,640
Ungraded non-special	3,892	469	9	343	821	2,593	2,120	4,713
<b>Total secondary</b>	<b>901,642</b>	<b>236,051</b>	<b>47,093</b>	<b>71,035</b>	<b>354,179</b>	<b>634,246</b>	<b>621,575</b>	<b>1,255,821</b>
Ungraded special not identified as primary or secondary	11,718	131	34	2,935	3,100	8,933	5,885	14,818
<b>Total</b>	<b>2,260,551</b>	<b>566,577</b>	<b>66,526</b>	<b>124,066</b>	<b>757,169</b>	<b>1,542,724</b>	<b>1,474,996</b>	<b>3,017,720</b>

(a) Pre-year 1 comprises *Kindergarten* in N.S.W. and A.C.T., *Preparatory* in Vic. and Tas., *Reception* in S.A. and *Transition* in N.T. (b) Year 7 is primary education in Qld. S.A., W.A. and N.T. (c) Includes 904 ungraded non-special students not identifiable as primary or secondary students. (d) Year 7 is secondary education in N.S.W., Vic., Tas. and the A.C.T.

### Tertiary Education

Since 1974 tertiary education has been free for award courses in universities, colleges of advanced education and technical and further education institutions (Streams 1-5). At the national level, the Commonwealth Government, through its Department of Education, provides a number of schemes of assistance for Australian students to facilitate access to education. A brief description of these schemes was given in Year Book No. 64 and a list of these schemes is included in the statistical table 'Student Assistance Schemes Funded by the Department of Education' (see page 245).

#### Technical and further education (TAFE)

The major part of technical and further education in Australia is provided in government administered institutions variously known as colleges, schools, or centres of technical and further education. There is also some TAFE provision in some colleges of advanced education, agricultural colleges and adult education authorities. These institutions are spread widely throughout Australia in both metropolitan and country areas. They vary greatly in size and in the scope of their educational provisions, though the largest tend to be located in metropolitan regions. TAFE institutions operate from early February to mid-December, in either three terms or two semesters depending on the institution.

Each of the States provides the bulk of the finance for its own institutions. The Commonwealth Government provides supplementary funds to the States on the basis of recommendations from the Commonwealth Tertiary Education Commission.

Government TAFE institutions offer an extremely wide range of vocational and non-vocational courses. Courses may be designed to supplement previous training, to provide specialised instruction in particular aspects of job skills, pre-vocational training prior to employment, preparatory or bridging instruction to permit entry to a chosen vocational course or adult education for personal interest, leisure or general enrichment purposes. Courses may be classified into the following six streams: professional, para-professional,

trades, other skilled, preparatory and adult or further education. Courses in the first two streams lead to the award of a diploma or associate diploma, in the third and fourth streams to a certificate, while the less formal shorter courses in the fifth and sixth streams do not lead to any qualification. The majority of TAFE courses are part-time, concurrent with employment, but there is also provision for full-time and external study.

There are additionally some non-government bodies which offer technical and further education of a non-apprenticeship nature. Business colleges offer courses in secretarial studies, while agencies such as the Workers Educational Association and a range of voluntary groups help meet adult education needs in the community.

The Commonwealth Tertiary Education Commission conducts an annual TAFE statistical collection. The 1981 Collection incorporated a new collection of student statistics for TAFE to replace the former collection which had operated since 1974. The statistics for 1981 and subsequent years are not compatible with those prior to 1981 as a key feature of the new collection is its emphasis on the individual *student* as the unit of reporting rather than on enrolment.

#### TECHNICAL AND FURTHER EDUCATION: STUDENTS WITHIN EACH STREAM OF STUDY, 1983

(Source: Commonwealth Tertiary Education Commission)

Stream of study	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia	
									1983	1982
—Number—										
1. Professional	1,268	1,640	51	136	177	—	—	63	3,335	2,971
2. Para-professional	100,015	38,538	15,578	16,882	43,505	4,406	1,072	3,956	223,952	199,973
3. Trade										
Basic trade	47,273	32,437	17,539	10,438	10,125	3,392	955	1,456	123,615	133,968
Post-trade	12,472	11,015	1,723	—	4,711	1,341	264	719	32,245	30,557
4. Other skilled	89,554	43,296	32,654	50,538	15,241	6,007	2,074	9,735	249,099	216,829
5. Preparatory	63,120	62,732	11,656	42,984	8,220	3,669	4,485	7,027	203,893	175,590
<b>Total streams 1-5 (a)</b>	<b>297,204</b>	<b>182,014</b>	<b>79,201</b>	<b>114,613</b>	<b>72,412</b>	<b>17,885</b>	<b>8,466</b>	<b>21,675</b>	<b>793,470</b>	<b>729,291</b>
6. Adult education	68,831	96,498	64,239	49,564	59,297	15,831	6,445	8,946	369,651	297,761
—Percentage (b)—										
1. Professional	0.4	0.9	0.1	0.1	0.2	—	—	0.3	0.4	0.4
2. Para-professional	33.7	21.2	19.7	14.7	60.1	24.6	12.7	18.3	28.2	27.4
3. Trade										
Basic trade	15.9	17.8	22.1	9.1	14.0	19.0	11.3	6.7	15.6	18.4
Post-trade	4.3	6.1	2.2	—	6.5	7.5	3.1	3.3	4.1	4.2
4. Other skilled	30.1	23.8	41.2	44.1	21.0	33.6	24.5	44.9	31.4	29.7
5. Preparatory	21.2	34.5	14.7	37.5	11.4	20.5	53.0	32.4	25.7	24.1
<b>Total streams 1-5 (a)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
6. Adult education	..	..	..	..	..	..	..	..	..	..

(a) The sum of the stream of study components does not add to the total as students enrolled in two or more streams have only been counted once in the total. (b) Students in each of the streams of study 1 to 5 as a percentage of the total number of students in Streams 1 to 5.

Note: The collection methodology precludes the net number of students in Streams 1 to 5 being added to the net number of students in Stream 6. The resultant figure would contain multiple counting to the extent that students undertaking programs in Streams 1 to 5 may also be enrolled in Stream 6 programs during the reference year.

#### TECHNICAL AND FURTHER EDUCATION: STUDENTS (STREAMS 1 TO 5) BY MODE OF ATTENDANCE, SEX AND AGE GROUP, AUSTRALIA, 1983

(Source: Commonwealth Tertiary Education Commission)

Age group (years)	Mode of Attendance								
	Internal		External		Multi-modal		Total		
	Males	Females	Males	Females	Males	Females	Males	Females	Persons
16 and under	36,342	31,371	818	1,000	256	214	37,416	32,585	70,001
17	35,838	19,334	919	1,165	369	371	37,126	20,870	57,996
18	43,408	20,308	1,182	1,555	493	423	45,083	22,286	67,369
19	38,529	16,436	1,387	1,417	503	390	40,419	18,243	58,662
20-24	85,691	51,536	7,562	5,547	1,694	1,115	94,947	58,198	153,145
25-29	45,081	34,335	7,418	3,895	1,193	707	53,692	38,937	92,629
30-39	57,252	57,423	9,675	5,404	1,549	1,072	68,476	63,899	132,375
40-49	22,452	29,732	2,833	1,776	935	648	26,220	32,156	58,376
50-64	10,886	18,772	1,177	873	343	270	12,406	19,915	32,321
65 and over	4,999	6,711	207	180	52	41	5,258	6,932	12,190
Not stated	27,193	29,503	311	255	213	931	27,717	30,689	58,406
<b>Total</b>	<b>407,671</b>	<b>315,461</b>	<b>33,489</b>	<b>23,067</b>	<b>7,600</b>	<b>6,182</b>	<b>448,760</b>	<b>344,710</b>	<b>793,470</b>

## TECHNICAL AND FURTHER EDUCATION: DUTY HOURS OF TEACHING STAFF BY NATURE OF DUTIES, 1983

('000 Hours)

(Source: Commonwealth Tertiary Education Commission)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
Teaching hours—									
Day . . . . .	3,179.3	2,285.2	1,193.0	1,032.9	897.8	297.9	194.5	218.7	9,299.4
Evening . . . . .	1,213.9	797.3	466.9	141.2	359.8	110.1	35.2	110.8	3,235.2
<i>Total</i> . . . . .	<i>4,393.2</i>	<i>3,082.5</i>	<i>1,659.9</i>	<i>1,174.1</i>	<i>1,257.6</i>	<i>408.0</i>	<i>229.7</i>	<i>329.5</i>	<i>12,534.5</i>
Non-teaching hours . . . . .	3,532.6	2,474.2	1,427.5	1,203.3	689.0	359.8	258.5	255.0	10,199.9
<i>Total duty hours</i> . . . . .	<i>7,925.8</i>	<i>5,556.7</i>	<i>3,087.4</i>	<i>2,377.5</i>	<i>1,946.6</i>	<i>767.8</i>	<i>488.2</i>	<i>584.5</i>	<i>22,734.4</i>

## TECHNICAL AND FURTHER EDUCATION: FULL-TIME EQUIVALENTS OF NON-TEACHING STAFF (a) BY TYPE OF APPOINTMENT AND ACTIVITY, 1983

(Source: Commonwealth Tertiary Education Commission)

Type of appointment and activity	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
Full time—									
TAFE only . . . . .	2,977.8	1,941.2	1,420.2	799.4	1,024.3	294.0	88.0	206.6	8,751.4
Multi-sector . . . . .	12.2	225.7	30.6	55.1	109.3	—	120.1	58.5	611.5
<i>Total full-time</i> . . . . .	<i>2,990.0</i>	<i>2,166.9</i>	<i>1,450.8</i>	<i>854.5</i>	<i>1,133.6</i>	<i>294.0</i>	<i>208.1</i>	<i>265.1</i>	<i>9,362.9</i>
Part-time . . . . .	220.2	315.3	35.8	93.4	151.4	83.0	10.8	81.3	991.1
<i>Total FTE (b)</i> . . . . .	<i>3,210.1</i>	<i>2,482.2</i>	<i>1,486.6</i>	<i>947.9</i>	<i>1,284.9</i>	<i>377.0</i>	<i>218.9</i>	<i>346.4</i>	<i>10,354.0</i>
Number of persons . . . . .	3,398	3,418	1,911	1,526	1,402	475	500	356	12,986

(a) Includes both institution-based and head office non-teaching staff. (b) Full-time equivalent units.

## Colleges of advanced education

Colleges of advanced education normally operate over three terms or two semesters, beginning in early to late February and running to mid-December. Students commencing courses will have completed a full secondary education, or will have demonstrated that they have high probability of successfully completing a course. There are quotas on new enrolments at many of the larger colleges with students able to enrol on a full-time or part-time basis and there are usually provisions for mature-age entry.

Courses offered in colleges of advanced education are often vocationally oriented and therefore less theoretical or academic than those offered in universities. The colleges aim to equip students so that immediately after graduation they may play an effective role in commerce, industry, the public service and the arts. The colleges emphasise undergraduate teaching more than research, although some colleges also offer post-graduate level courses, either at the diploma or master degree level. Most colleges have a commitment to part-time study, and many offer 'sandwich' courses, which provide a period of full-time study with associated periods of full-time employment. Some colleges also offer external courses.

Colleges of advanced education offer a great variety of courses embracing such areas as applied science, teacher education, liberal arts, business and secretarial studies and health science studies. The duration of a basic undergraduate course is two to three full-time years, at the conclusion of which an associate diploma, diploma or bachelor degree is awarded.

Some colleges may be large, diversified or multi-vocational institutions, while others are small single purpose institutions. There are 45 colleges of advanced education which can be broadly classified into the following categories:

- Central institutions of technology
- Other multi-purpose metropolitan colleges
- Regional colleges
- Specialist colleges

In addition there are two institutes of advanced education within universities.

The tuition system in colleges of advanced education is similar to that in universities. Lectures, tutorials and seminars are organised by the institution in the subjects offered. Normally, assessment of a student's progress is made by examination and/or completion of prescribed coursework.

Halls of residence are provided at some colleges of advanced education, principally those located in country areas. These can accommodate some, but not usually all, students enrolled at those institutions.



**ADVANCED EDUCATION: STUDENTS ENROLLED AND STAFF ENGAGED IN TEACHING  
ADVANCED EDUCATION COURSES, BY TYPE OF INSTITUTION, AUSTRALIA, 1984**

	<i>Type of institution</i>					<i>Total</i>
	<i>College of advanced education</i>	<i>Institute of advanced education within a university</i>	<i>TAFE institution</i>	<i>Other Commonwealth institution</i>	<i>Other</i>	
<b>STUDENTS ENROLLED</b>						
Course level—						
Masters degree . . . . .	1,815	—	—	—	—	1,815
Graduate diploma . . . . .	22,233	201	45	14	459	22,952
Bachelor degree . . . . .	98,933	1,039	902	—	805	101,679
Diploma . . . . .	30,915	866	1,323	217	1,260	34,581
Associate diploma . . . . .	18,510	651	2,606	41	155	21,963
Miscellaneous (a) . . . . .	2,714	2	83	23	8	2,830
<b>Total students enrolled . . . . .</b>	<b>175,120</b>	<b>2,759</b>	<b>4,959</b>	<b>295</b>	<b>2,687</b>	<b>185,820</b>
<b>TEACHING STAFF (b)</b>						
Designation—						
Above senior lecturer . . . . .	735	9	7	8	9	767
Senior lecturer . . . . .	2,066	34	51	9	55	2,215
Lecturer . . . . .	5,665	96	226	21	177	6,184
Other . . . . .	1,283	6	72	8	73	1,441
<b>Total teaching staff . . . . .</b>	<b>9,748</b>	<b>143</b>	<b>356</b>	<b>46</b>	<b>314</b>	<b>10,607</b>

(a) Students who are enrolled in parts of advanced education courses, including single subjects, but who are not proceeding to an award of the institution. (b) Full-time equivalent units, rounded to whole numbers.

Note: Prior to 1983, advanced education statistics published by the ABS related only to Colleges of Advanced Education (CAEs) and institutes of advanced education within universities (former CAEs). The statistics for 1983 onwards relate to all advanced education courses conducted within any tertiary education institution in Australia.

**ADVANCED EDUCATION: STUDENTS BY COURSE LEVEL, TYPE OF ENROLMENT, AGE GROUP  
AND SEX, AUSTRALIA, 1979 TO 1984**

	1979	1980	1981	1982	1983	1984
Course level—						
Masters degree . . . . .	874	1,044	1,142	1,457	1,585	1,815
Graduate diploma . . . . .	16,161	18,402	20,475	21,443	22,309	22,952
Bachelor degree . . . . .	75,350	82,464	87,905	93,056	97,260	101,679
Diploma . . . . .	50,857	43,161	37,911	33,562	35,266	34,581
Associate diploma . . . . .	12,425	14,395	15,316	16,319	20,202	21,963
Miscellaneous (a) . . . . .	..	2,098	2,318	2,751	3,271	2,830
Type of enrolment—						
Full-time internal . . . . .	82,125	78,225	76,685	77,795	86,325	90,852
Part-time internal . . . . .	56,368	62,253	64,913	65,992	67,754	67,679
External . . . . .	17,174	21,086	23,469	24,801	25,814	27,289
Age (in years) (b)—						
19 and under . . . . .	49,126	47,693	45,095	45,684	48,404	49,957
20-29 . . . . .	70,824	72,376	74,759	75,431	79,984	81,358
30-59 . . . . .	34,953	39,701	43,670	46,366	49,689	52,729
60 and over . . . . .	181	240	440	320	439	425
Not stated . . . . .	663	1,554	1,103	787	1,377	1,351
Sex—						
Males . . . . .	79,800	82,823	85,439	87,504	93,316	96,544
Females . . . . .	75,867	78,741	79,628	81,084	86,577	89,276
<b>Persons . . . . .</b>	<b>155,667</b>	<b>161,564</b>	<b>165,067</b>	<b>168,588</b>	<b>179,893</b>	<b>185,820</b>

(a) Miscellaneous students were not identifiable prior to 1980. Miscellaneous students are students enrolled in parts of advanced education courses, including single subjects, who are not proceeding to an award. (b) The 1979 components do not add to total persons because some students out of scope of the statistical collection are included and cannot be separately identified. Total persons are the actual number of students enrolled in advanced education courses.

Note: The statistics prior to 1983 relate only to advanced education courses conducted at colleges of advanced education and institutes of advanced education in universities (former CAEs). The statistics for 1983 and 1984 relate to all advanced education courses conducted within any tertiary education institution in Australia.

**ADVANCED EDUCATION: COMMENCING STUDENTS, TOTAL STUDENTS AND STUDENTS  
COMPLETING COURSES, BY COURSE LEVEL AND FIELD OF STUDY, AUSTRALIA**

*(Source: Commonwealth Tertiary Education Commission)*

Field of study	Masters degree	Graduate diploma	Bachelor degree	Associate Diploma	Associate diploma	Miscellaneous (a)	Total		
							Males	Females	Persons
<b>COMMENCING STUDENTS, 1984</b>									
Agriculture/forestry . . .	—	61	284	277	991	..	1,154	459	1,613
Applied science . . .	111	1,393	4,798	259	1,971	..	5,678	2,854	8,532
Visual and performing arts . . .	24	269	2,461	980	853	..	1,694	2,893	4,587
Architecture/building . . .	4	93	831	2	243	..	978	195	1,173
Commercial and business studies . . .	121	2,745	9,890	215	2,219	..	10,049	5,141	15,190
Engineering . . .	74	379	3,064	47	1,056	..	4,453	167	4,620
Social sciences . . .	13	803	3,025	166	1,351	..	1,760	3,598	5,358
Humanities . . .	4	498	2,108	45	769	..	1,144	2,280	3,424
Para-medical studies . . .	8	420	1,130	1,134	363	..	697	2,358	3,055
Education . . .	87	6,194	7,902	8,996	281	..	7,494	15,966	23,460
Miscellaneous(a) . . .	..	..	..	..	..	2,137	1,122	1,015	2,137
<b>Total . . .</b>	<b>446</b>	<b>12,855</b>	<b>35,493</b>	<b>12,121</b>	<b>10,097</b>	<b>2,137</b>	<b>36,223</b>	<b>36,926</b>	<b>73,149</b>
<b>TOTAL STUDENTS, 1984</b>									
Agriculture/forestry . . .	—	102	729	714	2,058	..	2,579	1,024	3,603
Applied science . . .	470	2,665	12,752	801	3,830	..	13,707	6,811	20,518
Visual and performing arts . . .	57	423	5,643	2,684	1,814	..	4,006	6,615	10,621
Architecture/building . . .	16	364	2,782	240	530	..	3,317	615	3,932
Commercial and business studies . . .	632	4,916	30,663	634	5,110	..	29,448	12,507	41,955
Engineering . . .	171	757	10,398	185	2,792	..	13,868	435	14,303
Social sciences . . .	40	1,449	7,562	457	2,952	..	4,131	8,329	12,460
Humanities . . .	27	909	5,645	156	1,521	..	2,771	5,487	8,258
Para-medical studies . . .	95	642	3,921	2,773	833	..	1,860	6,404	8,264
Education . . .	307	10,725	21,584	25,937	523	..	19,319	39,757	59,076
Miscellaneous(a) . . .	..	..	..	..	..	2,830	1,538	1,292	2,830
<b>Total . . .</b>	<b>1,815</b>	<b>22,952</b>	<b>101,679</b>	<b>34,581</b>	<b>21,963</b>	<b>2,830</b>	<b>96,544</b>	<b>89,276</b>	<b>185,820</b>
<b>STUDENTS COMPLETING COURSES, 1983</b>									
Agriculture/forestry . . .	—	19	76	172	445	..	499	213	712
Applied science . . .	83	558	1,788	126	429	..	1,931	1,053	2,984
Visual and performing arts . . .	2	207	904	632	365	..	851	1,259	2,110
Architecture/building . . .	1	85	336	65	88	..	502	73	575
Commercial and business studies . . .	63	1,615	3,222	192	631	..	3,922	1,801	5,723
Engineering . . .	21	141	1,177	58	411	..	1,773	35	1,808
Social sciences . . .	2	395	919	127	585	..	621	1,407	2,028
Humanities . . .	6	254	669	39	126	..	321	773	1,094
Para-medical studies . . .	10	176	576	692	196	..	362	1,288	1,650
Education . . .	31	4,086	5,459	7,767	48	..	5,792	11,599	17,391
<b>Total . . .</b>	<b>219</b>	<b>7,536</b>	<b>15,126</b>	<b>9,870</b>	<b>3,324</b>	<b>..</b>	<b>16,574</b>	<b>19,501</b>	<b>36,075</b>

(a) Students enrolled in parts of advanced education courses but who are not proceeding towards an award. Miscellaneous students are not allocated to a field of study and do not appear in the course completions statistics since, by definition, they do not proceed to an award.

Note: Courses have been classified to ten fields of study on the basis of the vocational emphasis of a course.

**ADVANCED EDUCATION: TEACHING AND NON-TEACHING STAFF, AUSTRALIA, 1979 TO 1984**  
(Full-time equivalent units, rounded to whole numbers)

	1979	1980	1981	1982	1983	1984
<b>Teaching staff (a)—</b>						
Full-time . . . . .	8,864	8,927	8,781	8,605	9,012	9,079
Part-time . . . . .	1,312	1,312	1,213	1,223	1,418	1,528
<b>Total . . . . .</b>	<b>10,175</b>	<b>10,239</b>	<b>9,995</b>	<b>9,828</b>	<b>10,430</b>	<b>10,607</b>
<b>Non-teaching staff (b)—</b>						
Full-time . . . . .	10,271	10,226	10,241	9,874	9,905	10,268
Part-time . . . . .	905	965	974	995	966	1,027
<b>Total . . . . .</b>	<b>11,175</b>	<b>11,191</b>	<b>11,215</b>	<b>10,869</b>	<b>10,871</b>	<b>11,296</b>

(a) The teaching staff statistics prior to 1983 relate only to the teaching of advanced education courses conducted at CAEs and institutes of advanced education in universities (former CAEs); the statistics for 1983 and 1984 relate to the teaching of all advanced education courses conducted within any tertiary education institution in Australia.

(b) Non-teaching staff statistics for all years relate only to CAEs.

### Universities

The university year in Australia normally runs from late February or early March to mid-December over three terms or two semesters depending on the institution. Normally students commencing courses will have completed a full secondary education, though most universities have some provisions for admitting other persons who can demonstrate that they have a high probability of successfully completing a course. There are quotas on new enrolments in most professional faculties such as medicine and engineering in Australian universities. Although there are usually provisions for mature-age entry, the majority of students proceed straight from school.

**UNIVERSITIES: STUDENTS BY COURSE LEVEL, TYPE OF ENROLMENT, AGE GROUP AND SEX, AUSTRALIA, 1979 TO 1984**

	1979	1980	1981	1982	1983	1984
<b>Course level—</b>						
Doctorate(a) . . . . .	5,924	6,150	6,378	7,040	7,195	7,485
Masters degree . . . . .	13,978	14,424	15,443	16,341	16,338	16,488
Bachelor degree . . . . .	129,222	130,664	132,372	131,992	133,275	135,605
Non-degree . . . . .	11,686	11,918	12,418	12,030	12,542	13,100
<b>Type of enrolment(b)—</b>						
Full-time internal . . . . .	99,080	98,993	99,924	100,357	102,801	106,019
Part-time internal . . . . .	48,919	50,325	51,462	51,900	51,231	50,682
External . . . . .	12,811	13,838	15,225	15,146	15,318	15,977
<b>Age (in years)—</b>						
19 and under . . . . .	48,281	48,372	48,085	47,594	47,953	49,018
20-29 . . . . .	76,504	76,810	77,514	77,111	77,583	78,301
30-59 . . . . .	34,505	37,111	40,015	41,576	42,573	43,936
60 and over . . . . .	538	661	839	952	1,095	1,232
Not stated . . . . .	982	202	158	170	146	191
<b>Sex—</b>						
Males . . . . .	95,254	94,945	95,414	94,354	94,508	95,157
Females . . . . .	65,556	68,211	71,197	73,049	74,842	77,521
<b>Persons . . . . .</b>	<b>160,810</b>	<b>163,156</b>	<b>166,611</b>	<b>167,403</b>	<b>169,350</b>	<b>172,678</b>

(a) Comprises Ph.D.s and doctorates other than Ph.D.s (b) Full-time external students prior to 1983 were included with full-time internal students. Full-time external students numbered 195 in 1979; 274 in 1980; 350 in 1981; 356 in 1982; 342 in 1983; and 394 in 1984.

There are nineteen universities in Australia, most of which are located in the capital cities. Universities are autonomous institutions established under Acts of the appropriate parliament and financed mainly by the Commonwealth Government. The basic undergraduate course in most disciplines is three or four full-time years in duration, at the conclusion of which a bachelor degree is awarded. A further one to two years of full-time study is required for a masters degree, and three to five years for a doctoral degree. Universities also offer post-graduate diploma courses in some disciplines. All universities offer full-time and part-time courses, and some offer external studies. In 1984, 61 per cent of students were enrolled in full-time study. As well as providing undergraduate courses, Australian universities are centres of post-graduate study and research. Some universities have institutes or units involved exclusively in research and/or post-graduate teaching. In 1984, 14 per cent of university students were undertaking higher degree study.

Courses in Australian universities are normally organised in faculties or schools, and students generally elect to study in a number of subject areas, or departments, within a faculty or school. Universities will generally offer some, but not all, of the following courses of study: agriculture, architecture, arts, dentistry, economics, education, engineering, law, medicine, music, science and veterinary science.

The system of tuition in universities is normally by means of lectures, tutorials, seminars and supervised practical work. Normally, assessment of a student's progress is made by examination and/or completion of prescribed coursework or of individual research.

Most universities have halls of residence on the campus which accommodate some of the students currently enrolled, usually those from remote or country areas. Student organisations on campus provide a wide range of sporting and social facilities for students.

**UNIVERSITIES: COMMENCING STUDENTS AND TOTAL STUDENTS, BY COURSE LEVEL AND FIELD OF STUDY, AUSTRALIA, 1984**

Field of study	Doctorate (a)	Masters degree	Bachelor degree	Non- degree	Total		
					Males	Females	Persons
<b>COMMENCING STUDENTS</b>							
Humanities . . . . .	195	688	13,770	1,649	6,081	10,221	16,302
Fine arts . . . . .	9	53	295	124	170	311	481
Social and behavioural sciences . . . . .	146	566	3,104	546	1,584	2,778	4,362
Law . . . . .	6	224	2,133	436	1,633	1,166	2,799
Education . . . . .	89	1,001	1,741	2,437	2,112	3,156	5,268
Economics, commerce, government	66	1,084	6,539	586	5,447	2,828	8,275
Medicine . . . . .	181	174	1,939	332	1,433	1,193	2,626
Dentistry . . . . .	11	49	249	6	214	101	315
Natural sciences . . . . .	501	515	8,510	1,135	6,613	4,048	10,661
Engineering, technology . . . . .	110	445	3,322	290	3,836	331	4 167
Architecture, building . . . . .	13	178	770	120	753	328	1,081
Agriculture, forestry . . . . .	66	151	661	103	662	319	981
Veterinary science . . . . .	21	36	281	2	168	172	340
Other or not stated . . . . .	1	45	36	1,001	484	599	1,083
<b>Total—1984 . . . . .</b>	<b>1,415</b>	<b>5,209</b>	<b>43,350</b>	<b>8,767</b>	<b>31,190</b>	<b>27,551</b>	<b>58,741</b>
1983 . . . . .	1,340	5,240	41,689	8,486	30,405	26,350	56,755
1982 . . . . .	1,731	5,682	41,479	8,058	30,794	26,156	56,950
<b>TOTAL STUDENTS</b>							
Humanities . . . . .	1,069	2,088	39,899	2,662	16,548	29,170	45,718
Fine arts . . . . .	73	191	898	179	532	809	1,341
Social and behavioural sciences . . . . .	693	1,659	8,835	831	4,410	7,608	12,018
Law . . . . .	50	754	8,609	666	5,933	4,146	10,079
Education . . . . .	528	3,384	5,410	3,188	5,083	7,427	12,510
Economics, commerce, government	401	3,120	19,583	1,129	16,501	7,732	24,233
Medicine . . . . .	894	520	9,681	477	6,685	4,887	11,572
Dentistry . . . . .	30	192	1,221	6	1,011	438	1,449
Natural sciences . . . . .	2,516	1,630	23,204	1,774	18,419	10,705	29,124
Engineering, technology . . . . .	639	1,700	11,641	426	13,330	1,076	14,406
Architecture, building . . . . .	98	542	3,271	263	3,057	1,117	4,174
Agriculture, forestry . . . . .	381	484	2,074	159	2,200	898	3,098
Veterinary science . . . . .	105	103	1,187	4	743	656	1,399
Other or not stated . . . . .	8	121	92	1,336	705	852	1,557
<b>Total—1984 . . . . .</b>	<b>7,485</b>	<b>16,488</b>	<b>135,605</b>	<b>13,100</b>	<b>95,157</b>	<b>77,521</b>	<b>172,678</b>
1983 . . . . .	7,195	16,338	133,275	12,542	94,508	74,842	169,350
1982 . . . . .	7,040	16,341	131,992	12,030	94,354	73,049	167,403

(a) Comprises Ph.D.s and doctorates other than Ph.D.s.

**UNIVERSITIES: STUDENTS COMPLETING COURSES, BY SEX AND COURSE LEVEL, AUSTRALIA,  
1979 TO 1984**

<i>Course level</i>	<i>1979</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>
<b>MALES</b>						
Doctorate (other than Ph.D.) . . . . .	47	44	43	51	45	47
Doctor of Philosophy (Ph.D.) . . . . .	730	678	711	697	704	761
Masters degree . . . . .	1,630	1,556	1,639	1,617	1,830	1,997
Post-graduate diploma . . . . .	1,692	1,547	1,452	1,362	1,337	1,393
Bachelor degree . . . . .	15,594	15,199	14,610	14,208	14,148	14,448
<i>Total</i> . . . . .	<i>19,693</i>	<i>19,024</i>	<i>18,455</i>	<i>17,935</i>	<i>18,064</i>	<i>18,646</i>
<b>FEMALES</b>						
Doctorate (other than Ph.D.) . . . . .	9	2	2	5	3	3
Doctor of Philosophy (Ph.D.) . . . . .	141	163	184	204	202	195
Masters degree . . . . .	514	538	617	623	754	846
Post-graduate diploma . . . . .	1,873	1,740	1,662	1,599	1,507	1,634
Bachelor degree . . . . .	10,561	10,660	10,872	10,999	11,579	11,470
<i>Total</i> . . . . .	<i>13,098</i>	<i>13,103</i>	<i>13,337</i>	<i>13,430</i>	<i>14,045</i>	<i>14,148</i>
<b>PERSONS</b>						
Doctorate (other than Ph.D.) . . . . .	56	46	45	56	48	50
Doctor of Philosophy (Ph.D.) . . . . .	871	841	895	901	906	956
Masters degree . . . . .	2,144	2,094	2,256	2,240	2,584	2,843
Post-graduate diploma . . . . .	3,565	3,287	3,114	2,961	2,844	3,027
Bachelor degree . . . . .	26,155	25,859	25,482	25,207	25,727	25,918
<i>Total</i> . . . . .	<i>32,791</i>	<i>32,127</i>	<i>31,792</i>	<i>31,365</i>	<i>32,109</i>	<i>32,794</i>

**UNIVERSITIES: STAFF BY TYPE OF EMPLOYMENT, AUSTRALIA, 1979 TO 1984**

(Full-time equivalent units, rounded to whole numbers)

	<i>1979</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>
<b>Teaching and research staff—</b>						
Full-time . . . . .	10,790	10,722	10,692	10,499	10,353	10,454
Part-time . . . . .	1,175	1,173	1,269	1,108	1,084	1,173
<b>Total</b> . . . . .	<b>11,965</b>	<b>11,895</b>	<b>11,962</b>	<b>11,607</b>	<b>11,437</b>	<b>11,627</b>
<b>Research only staff—</b>						
Full-time . . . . .	1,819	1,917	2,161	2,303	2,276	2,409
Part-time . . . . .	54	90	83	83	66	63
<b>Total</b> . . . . .	<b>1,873</b>	<b>2,007</b>	<b>2,244</b>	<b>2,386</b>	<b>2,342</b>	<b>2,472</b>
<b>General staff—</b>						
Full-time . . . . .	21,868	21,967	22,040	21,643	21,752	21,981
Part-time . . . . .	1,023	1,114	1,116	1,226	1,310	1,157
<b>Total</b> . . . . .	<b>22,890</b>	<b>23,081</b>	<b>23,156</b>	<b>22,869</b>	<b>23,063</b>	<b>23,138</b>
<b>All staff—</b>						
Full-time . . . . .	34,478	34,605	34,894	34,445	34,382	34,844
Part-time . . . . .	2,251	2,377	2,468	2,417	2,459	2,393
<b>Total</b> . . . . .	<b>36,729</b>	<b>36,982</b>	<b>37,362</b>	<b>36,862</b>	<b>36,842</b>	<b>37,237</b>

## Programs which span the educational sectors

### Aboriginal education

The need for special educational provisions for Aboriginal children and adults is recognised by the Commonwealth Government and currently assistance is made available for a wide variety of special measures at the early childhood, school and post-school levels. These include the employment of Aboriginal teacher aides, special enclave arrangements in tertiary institutions, TAFE programs designed to meet Aboriginal needs and support for Aboriginal independent schools. Furthermore three schemes of student assistance—Abseg, Abstudy and Aboriginal Overseas Study Awards (AOSAS)—provide financial support for individual students to participate in secondary and post-school education.

Since 1977, the all-Aboriginal and Torres Strait Islander *National Aboriginal Education Committee* (NAEC) has provided advice to the Commonwealth Government on the educational needs of Aboriginal people. Its role has recently been enhanced to that of principal adviser to the Minister for Education on policies in Aboriginal education. A major priority enunciated by the NAEC is teacher education and a target of 1,000 fully trained Aboriginal teachers in the classroom by 1990 has been set. To this end a special category of awards was introduced in 1984 to encourage mature age Aboriginal students to undertake studies leading to formal teaching qualifications. An additional 100 awards will be made available in 1986. For Aborigines in higher education, funds were earmarked for the provision of 200 new places for Aboriginal students in universities and colleges of advanced education in 1985. The Commonwealth Schools Commission's specific purpose programs, particularly the *Participation and Equity Program*, will support projects specially related to Aboriginal education. The Commonwealth Tertiary Education Commission's Equity Program also supports projects specifically related to Aborigines and higher education, as do its TAFE designated grants scheme and Participation and Equity Program for TAFE level courses.

#### **Migrant education—Adults**

Under the *Adult Migrant Education Program* which is administered by the Commonwealth Department of Immigration and Ethnic Affairs, settlement of newly arrived immigrants is facilitated by orientation programs on housing, education, employment and welfare, together with formal English instruction. Assistance for adult migrants is also provided by the Department of Education and the Commonwealth Tertiary Education Commission.

#### **Migrant education—Children**

The *English as a Second Language Program* (ESL), formerly the *Child Migrant Education Program*, is administered by the Commonwealth Schools Commission. It is aimed specifically at improving the English language competence of children from non-English speaking backgrounds, some of whom are Australian born.

The Department of Education continues to provide English language teaching and learning materials for migrant and refugee children. A wide variety of ESL materials, as well as in-service training courses for teachers, have been provided by the Language Education Branch of the Department. In excess of half of all Australian schools have benefitted from the materials program.

#### **Multicultural education**

The Commonwealth Schools Commission administers the *Multicultural Education Program* which aims to promote in all students an appreciation of the multicultural nature of Australian society through such projects as teaching community languages, intercultural studies and other activities aimed at encouraging respect for different cultural backgrounds.

In March 1984 the National Advisory and Co-ordinating Committee on Multicultural Education (NACCME) was established to co-ordinate, monitor and review multicultural education programs and activities across all levels of education. This Committee, which is serviced by the Department of Education provides expert advice to the minister on all areas of multicultural education. In 1985 NACCME sets its priority for action on the examinations of rationale for multicultural education, educational needs of ethnic minorities, language issues, education for intercultural understanding and nationwide mechanisms for information exchange in multicultural education.

#### **Participation and Equity Program**

The Participation and Equity Program (PEP) has the dual objectives of encouraging all young persons to participate in education or training at schools or technical and further education institutions, or in other forms of education or training, until they have completed a secondary education or an equivalent course of education or training and ensuring that, as far as practicable, the education and training provided in schools and technical and further education institutions produces more equitable outcomes of education for all young persons.

Grants are made available to the States and Territories for activities directed towards these objectives. Administration of PEP rests with the Commonwealth Schools Commission and the Commonwealth Tertiary Education Commission with the Commonwealth Department of Education exercising a coordinating role.

### Expenditure on education

The aim of this section is to provide information on the extent and direction of both government and private expenditure on education in recent years. The figures have been compiled in accordance with national accounting concepts. For explanation of these concepts, reference should be made to *Australian National Accounts: Concepts, Sources and Methods* (5216.0), *Classification Manual for Government Finance Statistics, Australia* (1217.0) and also to *Commonwealth Government Finance, Australia* (5502.0), and *State and Local Government Finance, Australia* (5504.0), from which figures included in this section have also been taken.

The emphasis given in this section to the outlays of the public sector reflects in part the relative importance of that sector in the provision of education services, but it is also a reflection of the lack of detailed information relating to educational activities in the private sector. Information is given, however, to show the order of magnitude of private sector spending, and also to show aggregate supply of education services and facilities. For more information on the extent and direction of both government and private expenditure on education, reference should be made to *Expenditure on Education, Australia* (5510.0).

#### AUSTRALIA: EXPENDITURE ON EDUCATION

Description	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
	(\$ million)					
Government						
General government final consumption expenditure . . . . .	4,649	5,197	5,947	6,816	7,642	8,407
Gross fixed capital expenditure . . . . .	739	666	654	645	695	772
Increase in stocks . . . . .		-1	1	-1	1	-3
Final expenditure (1) . . . . .	5,388	5,862	6,602	7,460	8,338	9,176
Personal benefit payments (2) . . . . .	396	400	432	455	525	626
Grants to non-profit institutions . . . . .	456	514	649	789	969	1,073
Other (3) . . . . .	21	16	7	10	4	38
Total government outlay on education . . . . .	6,261	6,792	7,690	8,714	9,836	10,913
Private—						
Private final consumption expenditure . . . . .	677	775	941	1,104	1,328	1,454
Gross fixed capital expenditure . . . . .	110	101	137	160	196	175
Final expenditure (4) . . . . .	787	876	1,078	1,264	1,524	1,629
Total final expenditure on education (1) + (4) . . . . .	6,175	6,739	7,679	8,725	9,862	10,805
Total outlay on education (1) + (2) + (3) + (4) . . . . .	6,593	7,154	8,119	9,189	10,391	11,469
Gross Domestic Product . . . . .	103,083	116,417	132,705	150,253	165,306	186,550
	(Per cent)					
Percentage of Gross Domestic Product—						
Total government outlay as percentage of Gross Domestic Product . . . . .	6.1	5.8	5.8	5.8	6.0	5.8
Total outlay on education as percentage of Gross Domestic Product . . . . .	6.4	6.1	6.1	6.1	6.3	6.1
Total final expenditure on education as percentage of Gross Domestic Product . . . . .	6.0	5.8	5.8	5.8	6.0	5.8
of which						
General government final consumption expenditure . . . . .	4.5	4.5	4.5	4.5	4.6	4.5
Private final consumption expenditure . . . . .	0.7	0.7	0.7	0.7	0.8	0.8
Government gross fixed capital expenditure . . . . .	0.7	0.4	0.4	0.4	0.4	0.4
Private gross fixed capital expenditure . . . . .	0.1	0.1	0.1	0.1	0.1	0.1

**Total expenditure on education**

Total expenditure on education can be measured by adding together the final expenditures of the public and private sectors.

The figure derived for total expenditure on education can be regarded as a measure of the aggregate supply of education services and facilities and can therefore be related to the supply of goods and services available from domestic production (i.e. gross domestic product). Final consumption expenditure and capital expenditure on education, by sector, can also be related to gross domestic product. These relationships are shown in the table above.

**Private sector**

Final expenditure on education by the private sector consists of private final consumption expenditure on education services, and expenditure on new fixed assets—mainly by private non-profit organisations and financed in part by grants from public authorities for private capital purposes. Private final consumption expenditure on education services is an estimate of fees paid by persons to government schools (mainly technical and agricultural colleges), fees and gifts to universities and school fees (other than boarding fees) paid to non-government schools, business colleges, etc. Expenditure on such items as school books, uniforms, etc., and expenditure by parents associations on school equipment is not included, being treated in the Australian National Accounts as private final consumption expenditure on other goods and services (such as clothing, books, household durables, etc.). Private expenditure on new fixed assets is estimated from statistics of the value of work done on new building and major additions to buildings of private educational institutions.

**Public sector**

The statistics presented here for the public sector relate to those outlays which have been identified as being primarily designed to serve the purposes of 'education', broadly as defined in the United Nations System of National Accounts. Included, therefore, are outlays on administration and regulation of school systems and institutions of higher learning and educational research; on provision, inspection and support of primary and secondary schools, colleges and universities, technical training institutions, schools for the handicapped, adult education facilities, pre-school centres, etc.; on scholarships, etc.; and on subsidiary services such as transportation of school children and fare concessions. Expenditure on school medical and dental services and provision of free milk for school children are not included, as these are regarded as primarily serving the purpose of health.

**Commonwealth Government**

Details of outlay on education by authorities of the Commonwealth Government are given in the following table.

COMMONWEALTH GOVERNMENT: OUTLAY ON EDUCATION CLASSIFIED BY GOVERNMENT PURPOSE CLASSIFICATION (\$ million)

<i>Government purpose classification</i>	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
041 Primary and secondary education . . . . .	856.4	848.4	990.3	1,194.1	1,434.6	1,590.2
042 Tertiary education . . . . .	1,556.5	1,668.2	1,845.9	2,045.6	2,276.3	2,501.6
0421 University education . . . . .	810.2	875.0	950.2	1,085.9	1,196.8	1,293.4
0422 Other higher education . . . . .	563.1	584.2	653.2	682.0	760.4	856.8
0423 Technical and further education . . . . .	168.3	199.4	229.6	263.1	302.1	327.6
0429 Tertiary education, nec . . . . .	14.8	9.7	12.9	14.5	17.1	23.8
043 Pre-school education and education not definable by level . . . . .	84.6	70.0	74.5	82.7	89.9	94.6
0431 Pre-school education . . . . .	33.1	33.3	31.4	33.1	33.5	33.4
0432 Special education . . . . .	0.3	0.3	..	0.1	0.1	0.1
0439 Other education not definable by level . . . . .	51.2	36.4	43.1	49.6	56.3	61.0
044 Transportation of students . . . . .	3.4	2.1	2.6	3.6	4.1	4.6
049 Education, nec . . . . .	24.9	22.9	19.5	20.1	17.1	16.8
Total outlay on education . . . . .	2,525.7	2,611.7	2,932.8	3,346.2	3,822.0	4,207.8
Total outlay on all purposes . . . . .	30,056.9	33,114.8	37,681.3	43,235.7	51,002.5	59,360.3
Outlay on education as a percentage of total outlay . . . . .	8.4%	7.9%	7.8%	7.7%	7.5%	7.1%



## YOUTH AFFAIRS

The Office of Youth Affairs (OYA) was set up by the Commonwealth Government in February 1977 in response to the findings of the Study Group on Youth Affairs. The Office, which is in the Department of Prime Minister and Cabinet, has overall responsibility for the co-ordination of all Commonwealth policies, programs and proposals affecting young people.

### Programs

#### *Program of Assistance to Youth Organisations (PAYO)*

Under this program, grants are provided for projects to assist national youth organisations to extend their services, broaden their participation of young people in management and organisational decision making and to improve planning co-ordination and the quality and relevance of their activities.

In addition to project related assistance, grants are provided to help establish effective national secretariats for national youth organisations.

#### *International Youth Exchanges*

The International Program of the Office of Youth Affairs is intended to promote Australian involvement in international youth affairs in the Asia-Pacific region through:

- (i) Government to government exchanges which are development oriented with a view to strengthening local programs and increasing expertise in the youth field.
- (ii) Grants to non-government organisations for international activities and to the Youth Affairs Council of Australia for an international function.
- (iii) Co-ordination of Commonwealth Youth Program (CYP) matters and liaison with other international agencies eg. UN, ESCAP, UNESCO. Activities include attendance at meetings, contributions to studies and information networks, provision of experts and hosting of fellows or trainees. Australian involvement in regional activities is expected to increase substantially due to the establishment of the CYP's new South Pacific Regional Centre, Fiji.
- (iv) Responses to invitations from other governments eg. the Japanese Goodwill Cruise.

#### *Community Employment Program*

As a positive step to create temporary jobs in these times of high youth unemployment, OYA has used the resources available through the Community Employment Program (CEP). This project received a Commonwealth grant of \$1.42 million and employed approximately 72 participants for between 35 weeks to one year in centres around Australia. The project encouraged and assisted specific groups of disadvantaged young people to participate in International Youth Year (IYY) activities.

Each State and Territory employed a Project Co-ordinator and assistant(s) in each capital city. Thirty-four project officers were allocated for specific projects aimed at target groups of disadvantaged young people. These were identified as women, Aborigines, ethnic, mentally and physically disabled, and remote and isolated areas. The project officers assisted these groups in establishing and maintaining links with IYY and the youth sector.

As a part of the CEP Project, the OYA developed a pilot in-service training program for all staff employed in the Project as well as other youth affairs workers in the field. The pilot scheme was closely monitored with a view to its development as an in-service training package with wide applicability to the youth affairs field in Australia.

#### *Youth service development*

OYA has initiated a three year youth service development strategy to improve the quality, co-ordination and relevance of youth services. The first stage of this strategy includes programs to:

- document and widely disseminate information on existing mechanisms which are operating successfully
- pilot projects to test the success of a variety of mechanisms to improve co-ordination and access to local youth services
- further develop in-service training for youth workers
- develop effective methods of identifying youth needs

OYA has also set up a national pilot program to fund a variety of community organisations or government authorities to enable interested young people to undertake voluntary community service work.

### International Youth Year (IYY) 1985

During IYY, the Office of Youth Affairs provided a secretariat to service the National IYY Coordination Committee. This Committee comprised Commonwealth, State and Territory Governments, unions, employers, local government and representatives from the voluntary community sector.

A special article on IYY was included in Year Book No. 69 (pages 244–246).

The year got off to a busy start, with radio stations in each State and Territory setting up telephone “Hotlines”, for young people to speak their minds about issues of concern to them. Young people decided it was time to set things right—from the widespread shortage of evening entertainment spots aside from hotels, to schemes to help the elderly and less fortunate through community service by young people.

Job creation on a local level was one of the major trends in IYY. Young people combined forces with community groups, local, State and Federal Government agencies, to establish self-help, short-term and some permanent work opportunities.

Young people in schools pushed for establishment of student representative councils, seeking the right to have a say in their education. Likewise, many local government authorities helped set up “junior councils”, to advise them on youth matters.

Peace was a major concern of nearly all Australia’s young people. Surveys showed up to 90 per cent of them believed there would be a nuclear holocaust in their lifetimes. Young people organised peace marches and committees in schools, as well as a number of national conferences on peace and disarmament.

Backing up these major youth initiatives, there were many programs established for IYY by non-government organisations, which received funding from the Commonwealth. Under the Program of Assistance to Youth Organisations, funds were provided to groups such as the Australian Council of Rural Youth; the Federation of Ethnic Communities Councils; the national Christian youth organisation Fusion; Girl Guides; YMCA and YWCA; and the Working With Young Women’s Group. Non-government involvement with IYY extended beyond voluntary community groups. Many corporations took deliberate steps to improve conditions for young people.

While encouraging a wide array of activities within its own borders, the Australian Government also supported many international youth projects, organised as part of IYY. Australian representatives played an important part in the Commonwealth Conference of Young People, which brought together 80 representatives of 52 countries in Ottawa, Canada, early in June 1985. Two Australian youth workers also completed six month training courses at the Commonwealth Youth Program Asia Centre in Chandigarh, India, during the first half of the year.

Involvement in the Asia Pacific Region’s Youth Exchange Program, set up in 1981, was stepped up in 1985. Youth worker exchanges were organised with Tonga, Papua New Guinea and Vanuatu. Under the same program, 10 Australians attended the IYY Friendly Gathering organised by the All China Youth Federation in May.

A group of young Australians joined the Japan Youth Goodwill Cruise, visiting Japan, Korea and Singapore early in the year. Eight young Australians received Australian Greek Presidential Awards to study in Greece for up to 12 months. And assistance was provided to the YMCA, to send delegates to the Asia Pacific YMCA Youth Leaders Conference, as well as to support an exchange between the Australian Council of Rural Youth and China.

Detailed information about young people and the factors affecting their lives was scarce before 1985, but the year included major efforts to redress this situation. The Australian Bureau of Statistics produced its first major *Youth Profile*, providing figures on many aspects of young people’s lives—from education and jobs, to housing and health. Other information, in areas such as health, social security, legal aid, education and employment, was gathered by both Government and non-government agencies. One of the major trends growing out of IYY was to set up information outlets, easily accessible to young people.

The Year was one of major advances for youth in Australia. But, as with all other successful International Years, the real results will begin to show up several years later, when those who have been inspired by the year’s events see some of their ideas and ideals brought to fruition.

**BIBLIOGRAPHY****ABS Publications**

University and Advanced Education Student Statistics, Australia, 1982 to 1984, Summary (4222.0)  
 Colleges of Advanced Education, Australia (4206.0)  
 University Statistics, Australia (4208.0)  
 National Schools Statistics Collection: Government Schools, Australia (4215.0)  
 Non-government Schools, Australia (4216.0)  
 National Schools Statistics Collection, Australia (4221.0)  
 Financial aspects are dealt with in the annual publications—  
 Commonwealth Government Finance, Australia (5502.0)  
 State and Local Government Finance, Australia (5504.0)  
 Expenditure on Education, Australia (5510.0)  
 Government Financial Estimates, Australia (5501.0)

**Other Publications**

Annual publications produced by the Commonwealth Tertiary Education Commission are:

Selected University Statistics  
 Selected Advanced Education Statistics  
 Selected TAFE Statistics

Publications produced regularly by the Department of Education are:

Australian Education Directory  
 Directory of Higher Education Courses  
 Directory of Education Research and Researchers in Australia  
 Education in Australia  
 Education News (a departmental journal)  
 Hemisphere (a bi-monthly Asian-Australian magazine)  
 Major Trends and Developments in Australian Education  
 Primary and Secondary Schooling in Australia

The annual reports of the respective State education departments also provide detailed statistical information.

**IN RETROSPECT**.....**Year Book No 2 (1901-1908)**

**Practical Results of Kindergarten Teaching.**—The establishment of the free kindergartens has had a very wholesome effect on both children and parents in the localities where the schools have been placed. Habits of industry, alertness, and self-respect spread from children to parents. The teachers who work in the kindergarten acquire an insight into the psychology of the child mind, and the tolerance, kindness, and self-restraint which they must necessarily possess react for good on the surrounding community. Children from the kindergartens are said to possess greater mental keenness, and to be more responsive to ordinary primary teaching than those who have not attended these institutions.

## CHAPTER 13

### AGRICULTURAL INDUSTRIES

This chapter is divided into the following major parts:—Introduction; Sources of statistics and definitions of units; Structural statistics (provides data on the legal arrangements, size and industry class of the business organisations operating within the agricultural sector); Value of agricultural commodities produced and index of values at constant prices; Apparent consumption of foodstuffs and nutrients; Land tenure and utilisation; Crop statistics; Livestock statistics; Livestock products; Agricultural improvements, employment, regulation of agricultural industries, and the agricultural research activities of the Commonwealth Scientific and Industrial Research Organization (CSIRO).

#### Introduction

The development of Australian agricultural industries has been determined by interacting factors such as profitable markets, the opening up of new land (including the development of transport facilities) and technical and scientific achievements. Subsistence farming, recurring gluts, low prices and losses to farmers were gradually overcome by the development of an export trade. Profitable overseas markets for merino wool and wheat, and the introduction of storage and refrigerated shipping for the dairying and meat industry combined to make the agricultural sector Australia's main export earner. Until the late 1950s, agricultural products comprised more than 80 per cent of the value of Australia's exports. Since then, the proportion of Australia's exports coming from the agricultural sector has declined markedly.

However, this decline in importance has been due not to a decline in agricultural activity but rather to an increase in the quantity and values of the exports of the mining and manufacturing sectors. In fact, the agricultural sector experienced an increase in total output over that period. One interesting aspect of this increase in output is that it was accompanied by a large reduction in the size of the agricultural labour force, implying a large growth in productivity within the sector.

#### Sources of statistics and definitions of units

##### Agricultural Census

The major source of the statistics in this chapter is the Agricultural Census conducted at 31 March each year. This collects a wide range of information from agricultural establishments with agricultural activity covering the physical aspects of agriculture such as area and production of crops, fertilisers used, number of livestock disposed of, etc. In conjunction with the Census, certain supplementary collections are conducted in some States where this has proved expedient, e.g. where the harvesting of certain crops has not been completed by 31 March (apples, potatoes, etc.), special returns covering the crops concerned are collected after the completion of the harvest.

The ABS excludes from the Census those establishments which make only a small contribution to overall agricultural production. Thus the 1984-85 Census includes establishments with agricultural activity which had, or were expected to have, an estimated value of agricultural operations of \$2,500 or more. In previous years the value cut off was applied at the enterprise level—for 1981-82 the value was \$2,500 and for earlier years, \$1,500.

While these changes have resulted in some changes in the counts of numbers of establishments appearing in publications, the effect on the statistics of production of major commodities is small. Statistics of minor commodities normally associated with small scale operations may be affected to a greater extent.

Details of the method used in the calculation of the estimated value of agricultural operations are contained in the publication *Agricultural Industries: Structure of Operating Units, Australia* (7102.0).

**Integrated Register Information System (IRIS)**

The former register, the Integrated Agricultural Register (IAR), contained information about the area, type, legal status, level of activity and location of units engaged in agriculture, and was originally compiled by adding data from a special census of economic units conducted in 1974 to existing data relating to physical characteristics of agricultural establishments. Details of agricultural units for 1983-84 have been derived from the Integrated Register Information System (IRIS) which has absorbed the IAR. Details of the structure of economic units engaged in agriculture, in hierarchical order, are:

- *Enterprise* (the second level of economic unit). The enterprise is that unit comprising all operations in Australia of a single operating legal entity. (The term 'single legal entity' means a sole trader, partnership, company, trust, co-operative or estate in the private sector, or a department, local government authority or statutory authority in the government sector). For the agricultural sector, a 'multi-State enterprise' is an enterprise which belongs to an enterprise group which undertakes agricultural activities in more than one State.
- *Establishment* (the smallest economic unit). The establishment covers all operations carried out by one enterprise at a single physical location.

**Other Statistical Collections**

The ABS conducts a number of other collections to obtain agricultural statistics. These include collections from wool brokers and dealers, livestock slaughterers and other organisations involved in the marketing and selling of agricultural commodities.

For financial statistics from the Agricultural Finance Survey, last conducted for 1980-81, see Year Book No. 69, page 250, or *Agricultural Industries: Financial Statistics, Australia 1980-81* (7507.0).



Cotton growing in northern Australia.

### Structural statistics

The following tables provide information relating to the structure of operating units during 1983-84. Although the definitions of the operating units have been provided above, the following terminology is also used:

- *Industry*. As set out in the *Australian Standard Industrial Classification (ASIC)* (1201.0 and 1202.0). These publications provide details of the methodology used in determining the industry class of an economic unit.
- *Estimated Value of Agricultural Operations (EVAO)*. This is determined by valuing the physical crop and livestock information collected in the Agricultural Census.

A further explanation of this terminology and more detailed statistics are given in the publication *Agricultural Industries: Structure of Operating Units, Australia (7102.0)*.

#### NUMBER OF UNITS BY TYPE OF UNIT

<i>Year/unit</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust. (a)</i>
1981-82(b)—							
Agricultural establishments . . . . .	52,695	46,167	33,820	19,170	16,613	5,664	174,166
Non-agricultural establishments with agricultural activity . . . . .	1,017	2,440	1,500	2,232	939	308	8,506
Agricultural enterprises . . . . .	50,872	44,873	32,342	18,699	15,354	5,439	168,309
Non-agricultural enterprises operating agricultural establishments . . . . .	831	793	407	251	316	164	2,795
1982-83(c)—							
Agricultural establishments . . . . .	52,952	46,661	33,764	19,840	16,471	5,702	175,731
Non-agricultural establishments with agricultural activity . . . . .	753	506	272	279	338	138	2,294
Agricultural enterprises . . . . .				—n.a.—			
Non-agricultural enterprises operating agricultural establishments . . . . .				—n.a.—			
1983-84(c)p—							
Agricultural establishments . . . . .	52,704	45,560	33,948	19,289	16,584	5,586	174,025
Non-agricultural establishments with agricultural activity . . . . .	307	424	219	190	166	78	1,387
Agricultural enterprises . . . . .				—n.a.—			
Non-agricultural enterprises operating agricultural establishments . . . . .				—n.a.—			

(a) Includes enterprises and establishments in the Northern Territory, Australian Capital Territory and multi-State enterprises.

(b) As recorded by the Integrated Agricultural Register in its last year of operation. Agricultural Enterprises, and their component Agricultural Establishments, were not tabulated if estimated value of agricultural operations of the parent enterprise was less than \$2,500.

(c) Establishments recorded by the Agricultural Census.

**AGRICULTURAL ESTABLISHMENTS, INDUSTRY AND ESTIMATED VALUE OF AGRICULTURAL OPERATIONS: 1983-84**

ASIC Code	Industry of establishment Description	Estimated value of agricultural operations (\$'000)										200 and more	Total enterprises(a)	
		3-9	10-19	20-29	30-39	40-49	50-59	60-74	75-99	100-149	150-199			
A	Agriculture, Forestry, Fishing and Hunting													
01	Agriculture													
0124	Poultry for meat . . . . .	15	33	43	50	74	60	96	100	88	23	91	681	
0125	Poultry for eggs . . . . .	42	57	43	32	38	31	54	58	145	101	380	996	
0134	Grapes . . . . .	535	664	703	796	529	425	339	262	154	48	75	4,635	
0135	Plantation fruit . . . . .	199	387	334	241	177	149	150	143	110	49	70	2,036	
0136	Orchard and other fruit . . . . .	1,179	1,088	811	660	517	409	464	495	511	194	294	6,973	
0143	Potatoes . . . . .	56	111	131	124	127	118	148	201	279	158	294	1,758	
0144	Vegetables (except potatoes) . . . . .	671	832	539	405	297	226	248	301	390	213	479	4,704	
0181	Cereal grains (incl. oil-seeds n.e.c.) . . . . .	775	1,136	1,049	1,054	1,115	1,188	1,799	2,626	3,786	2,444	5,277	22,420	
0182	Sheep cereal grains . . . . .	462	1,031	1,396	1,518	1,625	1,583	2,382	3,210	3,976	2,008	2,625	21,869	
0183	Meat cattle cereal grains . . . . .	397	614	529	434	358	300	349	478	573	274	386	4,726	
0184	Sheep meat cattle . . . . .	1,268	1,493	1,301	1,029	807	660	799	799	838	408	514	10,154	
0185	Sheep . . . . .	3,498	3,484	2,583	2,135	1,749	1,342	1,520	1,652	1,533	589	659	21,526	
0186	Meat cattle . . . . .	11,175	7,079	3,303	1,881	1,202	847	858	922	899	437	829	32,363	
0187	Milk cattle . . . . .	455	976	1,343	1,922	2,529	2,660	3,337	3,208	2,210	545	351	19,655	
0188	Pigs . . . . .	307	346	252	213	180	142	194	227	296	149	301	2,672	
0191	Sugar cane . . . . .	34	133	252	468	701	726	955	1,082	1,031	415	319	6,122	
0192	Peanuts . . . . .	9	19	26	38	35	39	52	51	57	29	28	388	
0193	Tobacco . . . . .	2	13	31	51	67	119	198	163	40	23	708		
0194	Cotton . . . . .	1	3	2	2	3	2	6	8	21	33	342	425	
0195	Nurseries . . . . .	255	263	243	182	101	163	144	147	184	93	261	2,338	
0196	Agriculture n.e.c. . . . .	2,267	1,660	763	494	302	200	180	175	144	50	83	6,876	
	<b>Total (ASIC code 01)</b> . . . . .	<b>23,600</b>	<b>21,411</b>	<b>15,659</b>	<b>13,709</b>	<b>12,517</b>	<b>11,337</b>	<b>14,193</b>	<b>16,343</b>	<b>17,388</b>	<b>8,300</b>	<b>13,681</b>	<b>174,025</b>	
02	Services to agriculture . . . . .	42	28	15	5	5	5	9	1	3	—	—	128	
03	Forestry and logging . . . . .	13	8	4	—	2	1	1	2	—	1	1	34	
04	Fishing and hunting . . . . .	2	2	1	1	—	1	—	—	—	—	—	8	
	<b>Total (ASIC Division A)</b> . . . . .	<b>23,657</b>	<b>21,449</b>	<b>15,679</b>	<b>13,715</b>	<b>12,524</b>	<b>11,344</b>	<b>14,203</b>	<b>16,346</b>	<b>17,391</b>	<b>8,301</b>	<b>13,682</b>	<b>174,195</b>	
B	Mining . . . . .	8	2	1	—	—	—	1	—	2	—	—	19	
C	Manufacturing . . . . .	28	38	24	11	5	2	6	8	8	1	13	160	
D	Electricity, Gas and Water . . . . .	—	—	—	—	1	—	1	—	—	—	1	3	
E	Construction . . . . .	79	56	28	10	5	7	5	3	2	—	—	234	
F	Wholesale and Retail Trade . . . . .	68	45	28	29	17	12	14	8	13	5	16	298	
G	Transport and Storage . . . . .	78	58	28	11	8	4	5	5	4	—	1	222	
H	Communication . . . . .	—	—	—	—	—	—	—	—	—	—	—	—	
I	Finance, Property and Business Services . . . . .	22	11	5	3	—	1	—	—	1	—	—	49	
J	Public Administration and Defence . . . . .	—	1	1	—	—	—	—	1	—	—	—	3	
K	Community Services . . . . .	13	7	14	7	6	6	9	12	16	12	24	135	
L	Recreation, Personal and Other Services . . . . .	41	13	8	9	3	3	1	1	—	—	1	94	
	<b>Total, all industries</b> . . . . .	<b>23,994</b>	<b>21,680</b>	<b>15,815</b>	<b>13,769</b>	<b>12,569</b>	<b>11,379</b>	<b>14,245</b>	<b>16,384</b>	<b>17,437</b>	<b>8,319</b>	<b>13,738</b>	<b>175,412</b>	

(a) Includes establishments with an EVAO of less than \$3,000

**AGRICULTURAL ESTABLISHMENTS(a) INDUSTRY: 1983-84**

ASIC Code	Industry of establishment Description	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia(b)
A	Agriculture, Forestry, Fishing and Hunting—							
01	Agriculture—							
0124	Poultry for meat . . . . .	329	123	96	68	48	15	681
0125	Poultry for eggs . . . . .	354	210	192	99	109	27	996
0134	Grapes . . . . .	755	1,912	120	1,633	207	6	4,635
0135	Plantation fruit . . . . .	1,046	—	879	—	106	—	2,036
0136	Orchard and other fruit . . . . .	2,107	1,203	1,144	1,525	671	318	6,973
0143	Potatoes . . . . .	243	675	288	154	190	208	1,758
0144	Vegetables (except potatoes) . . . . .	1,058	758	1,253	766	582	272	4,704
0181	Cereal grains (incl. oilseeds n.e.c.) . . . . .	6,964	4,818	3,985	3,271	3,328	51	22,420
0182	Sheep—cereal grains . . . . .	7,800	4,012	397	4,617	4,850	188	21,869
0183	Meat cattle—cereal grains . . . . .	1,838	452	2,235	132	45	19	4,726

For footnote see end of table.

AGRICULTURAL ESTABLISHMENTS(a) INDUSTRY: 1983-84—continued

ASIC Code	Industry of establishment		N.S.W.	Vic	Qld	S.A.	W.A.	Tas	Australia(b)
	Description								
0184	Sheep—meat cattle . . . . .		3,824	3,132	820	981	811	566	10,154
0185	Sheep . . . . .		7,260	7,053	1,244	2,589	2,122	1,222	21,526
0186	Meat cattle . . . . .		10,962	7,914	9,428	912	1,885	1,051	32,363
0187	Milk cattle . . . . .		3,232	10,455	2,778	1,309	630	1,245	19,655
0188	Pigs . . . . .		811	430	739	318	242	130	2,672
0191	Sugar cane . . . . .		526	—	5,595	—	1	—	6,122
0192	Peanuts . . . . .		3	—	384	—	1	—	388
0193	Tobacco . . . . .		42	268	398	—	—	—	708
0194	Cotton . . . . .		237	—	188	—	—	—	425
0195	Nurseries . . . . .		906	445	468	208	247	54	2,338
0196	Agriculture n.e.c . . . . .		2,407	1,700	1,317	707	509	214	6,876
	<i>Total (ASIC code 01)</i> . . . . .		<i>52,704</i>	<i>45,560</i>	<i>33,948</i>	<i>19,289</i>	<i>16,584</i>	<i>5,586</i>	<i>174,025</i>
02	Services to agriculture . . . . .		16	56	30	11	13	2	128
03	Forestry and logging . . . . .		7	6	8	—	2	11	34
04	Fishing and hunting . . . . .		—	—	2	2	3	1	8
	<i>Total (ASIC division A)</i> . . . . .		<i>52,727</i>	<i>45,622</i>	<i>33,988</i>	<i>19,302</i>	<i>16,602</i>	<i>5,600</i>	<i>174,195</i>
B	Mining . . . . .		5	5	3	4	2	—	19
C	Manufacturing . . . . .		30	31	23	35	37	4	160
D	Electricity, Gas and Water . . . . .		—	2	—	1	—	—	3
E	Construction . . . . .		44	92	25	36	24	13	234
F	Wholesale and Retail Trade . . . . .		83	83	37	46	29	19	298
G	Transport and Storage . . . . .		55	76	22	24	26	19	222
H	Communication . . . . .		—	—	—	—	—	—	—
I	Finance, Property and Business Services . . . . .		14	14	5	11	5	—	49
J	Public Administration and Defence . . . . .		2	—	—	1	—	—	3
K	Community Services . . . . .		33	11	55	13	15	6	135
L	Recreation, Personal and Other Services . . . . .		18	48	9	6	10	3	94
	<b>Total, all industries</b> . . . . .		<b>53,011</b>	<b>45,984</b>	<b>34,167</b>	<b>19,479</b>	<b>16,750</b>	<b>5,664</b>	<b>175,412</b>

(a) Includes establishments with an EAVO of less than \$3,000. (b) Includes the Northern Territory and the Australian Capital Territory.

**Value of agricultural commodities produced and index of values at constant prices**

**Definitions**

*Gross value of commodities produced* is the value placed on recorded production at the wholesale prices realised in the market place.

*Marketing costs* include freight, cost of containers, commission and other charges incurred in marketing.

*Local value of commodities produced* is the value placed on commodities at the place of production and is ascertained by deducting marketing costs from the gross value.

*Index of values at constant prices* is the index of the gross value of commodities produced at constant prices, i.e. it is a measure of change in value after the direct effects of price changes have been eliminated.

**VALUES OF AGRICULTURAL COMMODITIES: 1983-84**

	Gross value of agricultural commodities produced	Marketing costs	Local value of commodities produced	Index of values at constant prices of agricultural commodities produced (a) (Base year: 1979-80=1000)
	\$m	\$m	\$m	
Crops . . . . .	8,434.7	1,355.0	7,079.7	1,285
Livestock slaughtering and other disposals . . . . .	3,392.8	245.5	3,147.3	903
Livestock products . . . . .	3,489.8	165.9	3,323.9	1,035
<b>Total agriculture</b> . . . . .	<b>15,317.2</b>	<b>1,766.3</b>	<b>13,550.9</b>	<b>1,111</b>

(a) Weighted by average unit values for the year 1979-80.



**Publications**

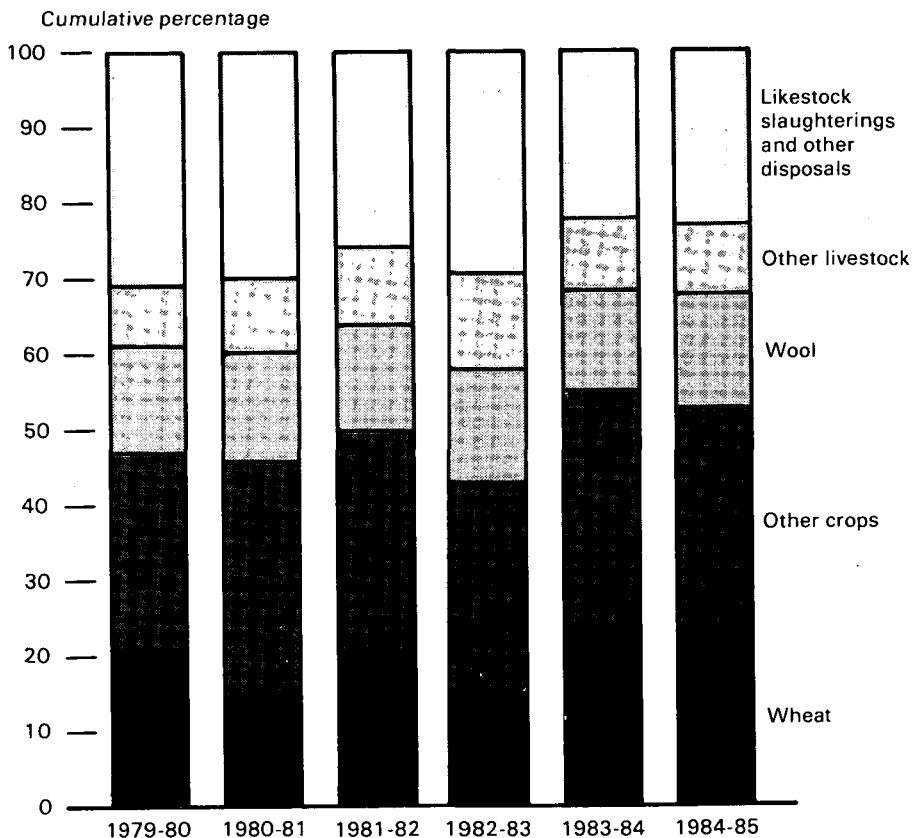
Two preliminary estimates of value of commodities produced are published: *Value of Principal Agricultural Commodities Produced, Australia, First Estimates (7501.0)* and *Value of Selected Agricultural Commodities Produced, Australia, Second Estimates (7502.0)*. A final publication, *Value of Agricultural Commodities Produced, Australia (7503.0)*, contains Indexes of Values at Constant Prices.

**Index of Agricultural Commodities Produced**

The index is consistent in scope with those of previous years. The indexes are weighted by the average unit values for the year 1979-80 with a reference base of 1979-80=1000.

For further details on how these and earlier series were calculated see Year Book No. 61, pages 1063-65 and *Value of Agricultural Commodities Produced, Australia (7503.0)*.

**PERCENTAGE OF TOTAL GROSS VALUE OF AGRICULTURAL COMMODITIES, AUSTRALIA, 1979-80 TO 1984-85**



**PLATE 34**

GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED

	(\$m)					
	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 <sup>p</sup>
<b>Crops—</b>						
Barley for grain . . . . .	449.8	380.9	463.4	290.8	734.0	772.7
Oats for grain . . . . .	98.8	139.5	155.7	116.1	203.8	128.0
Wheat for grain . . . . .	2,478.0	1,684.1	2,599.4	1,566.2	3,605.6	3,503.8
Other cereal grains . . . . .	218.9	327.6	294.1	260.4	408.7	400.1
Sugar cane cut for crushing . . . . .	548.2	799.7	590.2	508.9	516.6	500.4
Fruit and nuts . . . . .	406.6	459.8	464.4	498.0	554.4	626.7
Grapes . . . . .	231.1	178.2	222.8	212.5	217.0	199.2
Vegetables . . . . .	402.3	509.0	554.3	556.9	738.6	624.8
All other crops (a) . . . . .	707.3	827.2	967.6	1,000.5	1,456.0	1,377.2
<i>Total crops</i> . . . . .	<i>5,540.8</i>	<i>5,305.9</i>	<i>6,311.9</i>	<i>5,010.3</i>	<i>8,434.7</i>	<i>8,132.9</i>
<b>Livestock slaughterings and other disposals (b)—</b>						
Cattle and calves (c) . . . . .	2,386.0	2,056.5	1,890.1	2,076.2	2,037.5	2,118.9
Sheep and lambs . . . . .	654.3	718.9	646.7	548.0	562.1	539.5
Pigs . . . . .	311.3	337.5	396.1	414.9	373.7	435.2
Poultry . . . . .	307.2	361.4	362.7	413.1	419.4	468.4
<i>Total livestock slaughterings and other disposals</i> . . . . .	<i>3,658.8</i>	<i>3,474.3</i>	<i>3,295.6</i>	<i>3,452.2</i>	<i>3,392.8</i>	<i>3,562.1</i>
<b>Livestock products—</b>						
Wool . . . . .	1,651.4	1,669.5	1,788.7	1,760.9	2,016.1	2,321.3
Milk . . . . .	676.0	(d)885.1	(d)1,033.9	1,186.5	(d)1,153.2	(d)1,082.2
Eggs . . . . .	216.1	(e)227.4	(e)253.4	275.3	(e)280.6	(e)292.9
<i>Total livestock products (f) (g)</i> . . . . .	<i>2,564.3</i>	<i>2,803.8</i>	<i>3,100.6</i>	<i>3,245.8</i>	<i>3,489.8</i>	<i>3,726.4</i>
<b>Total value of agricultural commodities produced</b> . . . . .	<b>11,763.9</b>	<b>11,584.1</b>	<b>12,708.2</b>	<b>11,708.3</b>	<b>15,317.2</b>	<b>15,421.4</b>

(a) Includes pastures and grasses cut for hay and harvested for seed. Excludes crops for green feed or silage. (b) Includes net exports of livestock. (c) Includes dairy cattle slaughtered. (d) Excludes the Northern Territory and the A.C.T. (e) Excludes the A.C.T. (f) Includes honey and beeswax. (g) Excludes Northern Territory milk. Includes A.C.T. milk and eggs.

INDEX OF VALUES AT CONSTANT PRICES OF AGRICULTURAL COMMODITIES PRODUCED(a)

(Base year: 1979-80=1000)

	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
<b>Crops—</b>						
Barley for grain . . . . .	1,082	1,000	724	932	524	1,321
Oats for grain . . . . .	1,250	1,000	799	1,146	603	1,627
Wheat for grain . . . . .	1,127	1,000	663	1,017	545	1,373
Other cereal grains . . . . .	1,207	1,000	1,233	1,417	975	1,561
Sugar cane (b) . . . . .	983	1,000	1,120	1,162	1,192	1,086
Fruit and nuts . . . . .	1,022	1,000	1,069	988	1,017	961
Grapes . . . . .	783	1,000	825	984	963	994
Vegetables . . . . .	998	1,000	1,011	1,056	1,044	1,102
All other crops (c) . . . . .	991	1,000	964	1,106	931	1,361
<i>Total</i> . . . . .	<i>1,066</i>	<i>1,000</i>	<i>838</i>	<i>1,053</i>	<i>763</i>	<i>1,285</i>
<b>Livestock slaughterings and other disposals—</b>						
Cattle and calves (d) . . . . .	1,290	1,000	938	1,005	986	855
Sheep and lambs . . . . .	830	1,000	1,032	946	1,018	930
Pigs . . . . .	904	1,000	1,061	1,038	1,087	1,153
Poultry . . . . .	866	1,000	968	893	1,000	952
<i>Total (e)</i> . . . . .	<i>1,138</i>	<i>1,000</i>	<i>968</i>	<i>988</i>	<i>1,002</i>	<i>903</i>
<b>Livestock products—</b>						
Wool . . . . .	994	1,000	990	1,012	995	1,026
Milk . . . . .	1,031	1,000	947	956	1,011	1,089
Eggs . . . . .	1,017	1,000	959	927	961	935
<i>Total (f)</i> . . . . .	<i>1,004</i>	<i>1,000</i>	<i>974</i>	<i>990</i>	<i>995</i>	<i>1,035</i>
<b>Total agricultural commodities produced</b> . . . . .	<b>1,075</b>	<b>1,000</b>	<b>909</b>	<b>1,019</b>	<b>889</b>	<b>1,111</b>

(a) Indexes of values at constant prices (weighted by average unit values of the year 1979-80). (b) Sugar cane cut for crushing and planting. (c) Includes pastures and grasses. Excludes crops for green feed or silage. (d) Includes dairy cattle slaughtered. (e) Component series based on carcass weight. (f) Includes honey and beeswax.

### Apparent consumption of foodstuffs and nutrients

Estimates of consumption in Australia are compiled by deducting net exports from the sum of production and imports and allowing for recorded movement in stocks of the respective commodities. The term 'consumption' is used in a specialised sense, since the quantities actually measured are broadly the quantities available for consumption at a particular level of distribution, i.e. ex-market, ex-store or ex-factory depending on the method of marketing and/or processing. Because consumption of foodstuffs is measured, in general, at 'producer' level no allowance is made for wastage before they are consumed. The effect of ignoring wastage is ultimately to overstate consumption but it is believed that more efficient distribution and storage methods in recent years have cut down wastage. Furthermore, it is likely that many of the foodstuffs are being supplemented by householders' self-supplies over and above the broad estimate already made.

The estimates of consumption per capita have been derived by using Estimated Resident Population (ERP), which is compiled according to the place of usual residence of the population and includes an estimate for those persons temporarily overseas.

More detailed information on the consumption of foodstuffs is contained in the publication *Apparent Consumption of Foodstuffs and Nutrients, Australia (4306.0)*. For some commodities, more timely information is contained in the publication *Apparent Consumption of Selected Foodstuffs, Australia (Preliminary) (4315.0)*.

#### APPARENT PER CAPITA CONSUMPTION OF FOODSTUFFS

(Kg—unless otherwise indicated)

Commodity	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 p
<b>Meat and meat products—</b>						
Meat (carcass equivalent weight)						
Beef . . . . .	47.4	46.7	49.6	45.0	41.9	40.6
Veal . . . . .	2.5	2.5	2.6	3.5	2.4	2.1
Beef and veal . . . . .	49.9	49.2	52.2	48.4	44.3	42.7
Lamb . . . . .	15.5	15.8	16.3	16.2	16.7	15.4
Mutton . . . . .	5.2	5.2	3.8	4.7	5.1	6.0
Pigmeat (a) . . . . .	14.6	15.7	15.2	15.3	16.5	16.4
Total . . . . .	85.2	85.9	87.4	84.6	82.7	80.5
Offal and meat, n.e.i. . . . .	3.9	4.2	4.4	4.4	4.0	4.3
<b>Total meat and meat products . . . . .</b>	<b>89.2</b>	<b>90.1</b>	<b>91.8</b>	<b>89.0</b>	<b>86.7</b>	<b>84.8</b>
<b>Poultry—</b>						
Poultry (dressed weight) . . . . .	20.2	20.3	19.6	20.4	20.0	22.0
<b>Seafood—</b>						
Fresh and frozen (edible weight)—						
Fish—						
Australian . . . . .	1.4	1.8	1.6	1.2	1.7	n.y.a.
Imported . . . . .	1.5	1.7	1.1	1.5	1.8	n.y.a.
Crustacea and molluscs . . . . .	0.5	1.1	1.0	1.1	0.8	n.y.a.
Seafood otherwise prepared (product weight)—						
Australian . . . . .	0.5	0.4	0.4	0.6	0.6	n.y.a.
Imported—						
Fish . . . . .	1.9	1.8	1.9	1.5	2.0	n.y.a.
Crustacea and molluscs . . . . .	0.3	0.4	0.5	0.4	0.4	n.y.a.
<b>Total seafood . . . . .</b>	<b>6.2</b>	<b>7.2</b>	<b>6.4</b>	<b>6.3</b>	<b>7.4</b>	<b>n.y.a.</b>
<b>Milk and Milk Products—</b>						
Market milk (fluid whole) (litres) . . . . .	103.4	104.0	103.1	102.9	101.7	103.3
Condensed, concentrated and evaporated milk—						
Full cream sweetened . . . . .	0.7	0.9	0.6	0.9	0.7	n.y.a.
Full cream unsweetened . . . . .	2.2	2.7	2.4	1.8	2.2	n.y.a.
Skim . . . . .	1.4	1.0	1.2	0.8	0.9	n.y.a.
Powdered milk—						
Full cream . . . . .	0.8	0.9	0.9	0.8	0.7	n.y.a.
Skim . . . . .	3.7	3.2	2.8	2.7	2.3	n.y.a.
Infants' and invalids' food . . . . .	1.1	1.0	1.3	1.2	1.2	n.y.a.
Cheese (natural equivalent weight) . . . . .	6.6	6.6	7.0	7.4	7.7	8.1
<b>Total (converted to milk solids, fat and non-fat) . . . . .</b>	<b>23.5</b>	<b>23.1</b>	<b>23.0</b>	<b>22.8</b>	<b>22.5</b>	<b>n.y.a.</b>

For footnotes see end of table.

APPARENT PER CAPITA CONSUMPTION OF FOODSTUFFS—*continued*

(Kg—unless otherwise indicated)

Commodity	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 <sup>p</sup>
<b>Fruit and Fruit Products—</b>						
Fresh fruit (incl. fruit for fruit juice)—						
Citrus . . . . .	40.2	39.2	36.4	47.9	51.2	n.y.a.
Other . . . . .	39.3	35.8	37.8	39.4	38.2	n.y.a.
Jams, conserves, etc . . . . .	1.5	1.5	1.7	1.7	1.8	n.y.a.
Dried fruit . . . . .	2.5	2.2	2.3	2.5	2.4	n.y.a.
Processed fruit . . . . .	12.4	11.7	10.9	9.4	9.8	n.y.a.
<b>Total (fresh fruit equivalent) . . . . .</b>	<b>106.8</b>	<b>99.9</b>	<b>98.7</b>	<b>110.6</b>	<b>113.1</b>	<b>n.y.a.</b>
<b>Vegetables—</b>						
White potatoes . . . . .	54.9	54.9	57.6	52.2	62.6	n.y.a.
Other root and bulb vegetables . . . . .	17.3	17.5	18.7	16.9	17.4	n.y.a.
Tomatoes . . . . .	14.5	15.7	16.7	16.5	18.6	n.y.a.
Leafy and green vegetables . . . . .	25.1	22.3	20.8	21.4	21.8	n.y.a.
Other vegetables . . . . .	17.6	17.5	17.1	18.0	18.3	n.y.a.
<b>Total (fresh equivalent weight) . . . . .</b>	<b>129.5</b>	<b>127.8</b>	<b>130.8</b>	<b>125.0</b>	<b>138.8</b>	<b>n.y.a.</b>
<b>Grain Products—</b>						
Flour ( <i>b</i> ) . . . . .	70.5	70.7	72.0	67.1	70.7	n.y.a.
Breakfast foods—						
Oatmeal and rolled oats . . . . .	0.3	0.8	0.9	1.2	1.3	n.y.a.
Other (from grain) . . . . .	6.9	6.9	7.1	7.6	7.8	n.y.a.
<b>Total breakfast foods . . . . .</b>	<b>7.2</b>	<b>7.8</b>	<b>8.0</b>	<b>8.7</b>	<b>9.1</b>	<b>n.y.a.</b>
Table rice . . . . .	2.5	2.9	2.9	3.0	3.3	n.y.a.
<b>Total grain products . . . . .</b>	<b>80.2</b>	<b>81.4</b>	<b>82.9</b>	<b>78.8</b>	<b>83.1</b>	<b>n.y.a.</b>
Bread . . . . .	48.0	46.1	47.5	48.4	47.1	n.y.a.
<b>Eggs and Egg Products—</b>						
Total (eggs in shell weight) . . . . .	12.5	12.4	12.5	12.5	12.4	n.y.a.
Equivalent number of eggs . . . . .	220	220	222	221	223	n.y.a.
<b>Nuts (in shell)—</b>						
Peanuts . . . . .	1.3	1.5	1.5	2.1	1.8	n.y.a.
Tree nuts . . . . .	2.8	3.0	3.3	3.2	3.6	n.y.a.
<b>Oils and fats—</b>						
Butter . . . . .	4.6	4.3	4.3	4.0	3.9	4.0
<b>Total margarine . . . . .</b>	<b>8.9</b>	<b>9.2</b>	<b>9.5</b>	<b>9.6</b>	<b>9.6</b>	<b>9.1</b>
Table margarine . . . . .	6.4	6.7	6.8	6.8	6.9	6.7
Other margarine . . . . .	2.4	2.5	2.7	2.8	2.7	2.4
<b>Total (fat content) (<i>c</i>) . . . . .</b>	<b>21.5</b>	<b>21.5</b>	<b>21.8</b>	<b>21.6</b>	<b>21.5</b>	<b>21.2</b>
<b>Sugar—</b>						
As refined sugar . . . . .	12.8	13.7	12.5	12.0	11.5	n.y.a.
In manufactured foods . . . . .	34.6	35.0	34.8	33.7	32.5	n.y.a.
<b>Total . . . . .</b>	<b>47.4</b>	<b>48.7</b>	<b>47.2</b>	<b>45.7</b>	<b>44.0</b>	<b>n.y.a.</b>
Honey . . . . .	0.9	0.6	0.9	0.8	0.9	n.y.a.
<b>Total (<i>d</i>) . . . . .</b>	<b>51.6</b>	<b>52.7</b>	<b>51.4</b>	<b>49.1</b>	<b>48.1</b>	<b>n.y.a.</b>
<b>Beverages—</b>						
Tea . . . . .	1.6	1.5	1.6	1.4	1.5	1.4
Coffee ( <i>e</i> ) . . . . .	1.7	1.9	1.9	2.0	2.1	2.0
Aerated and carbonated waters (litres) . . . . .	63.9	67.6	64.2	65.7	63.0	67.3
Beer (litres) . . . . .	132.3	129.3	128.6	121.6	117.8	115.0
Wine (litres) . . . . .	17.3	18.2	19.1	19.7	20.4	21.4
Spirits (litres alcohol) . . . . .	1.0	1.1	1.2	1.2	1.1	1.2

(a) Includes bacon and ham. (b) Includes flour used for breadmaking. (c) Includes an estimate for vegetable oils and other fats. (d) Includes sugar content of syrups and glucose. (e) Coffee and coffee products in terms of roasted coffee.

### Nutrients

The nutrients table has been compiled by the Nutrition Section of the Commonwealth Department of Health and is based on the estimates of the quantity of foodstuffs available for per capita consumption.

For further information on the level of nutrient intake see the publication *Apparent Consumption of Foodstuffs and Nutrients, Australia (4306.0)*.

#### ESTIMATED SUPPLY OF NUTRIENTS AVAILABLE FOR CONSUMPTION (a)

(Per capita per day)

Nutrient	Unit	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
<b>Protein—</b>							
Animal . . . . .	g	67.6	65.4	66.0	66.0	65.0	63.8
Vegetable . . . . .	g	32.3	32.3	32.6	33.2	32.2	33.9
<i>Total</i> . . . . .	g	99.9	97.7	98.6	99.2	97.2	97.7
Fat (from all sources) . . . . .	g	148.4	145.3	147.6	149.3	147.6	147.3
Carbohydrate . . . . .	g	395.2	396.0	400.0	400.0	386.2	398.0
Calcium . . . . .	mg	899	932	922	917	914	911
Iron . . . . .	mg	15.4	14.7	14.9	15.2	15.0	15.2
Vitamin A activity . . . . .	µg	1,552	1,432	1,492	1,512	1,499	1,503
<b>Vitamin C (b)—</b>							
Unadjusted . . . . .	mg	105.4	108.9	106.7	105.3	115.3	122.3
Adjusted . . . . .	mg	75.8	79.7	78.4	76.6	87.6	93.2
<b>Thiamin (b)—</b>							
Unadjusted . . . . .	mg	1.8	1.7	1.8	1.8	1.8	1.9
Adjusted . . . . .	mg	1.5	1.5	1.5	1.5	1.5	1.6
Riboflavin . . . . .	mg	2.7	2.6	2.6	2.7	2.6	2.6
<b>Niacin (b)—</b>							
Unadjusted . . . . .	mg	23.3	22.3	22.6	22.8	22.9	23.1
Adjusted . . . . .	mg	40.0	38.6	39.0	39.3	39.1	39.3
Energy value . . . . .	kJ	14,430	14,285	14,460	14,545	14,200	14,370

(a) Figures are based on conversion factors calculated from the revised and enlarged edition of S. Thomas and M. Corden *Metric Tables of Composition of Australian Foods*, Canberra, 1977. (b) Data for vitamin C, Thiamin and Niacin show adjustments made for loss of nutrients in cooking and the extra niacin obtained from the metabolism of protein.



Sheep sale, near Wagga Wagga, N.S.W.

Australian Information Service

### Land tenures

Land tenure statistics, in the main, relate to land held under freehold tenure ('alienated or in process of alienation') or leasehold tenure ('leased or licenced') with all agricultural establishments falling within these categories. Descriptions of the land tenure systems of the States and the Territories, and conspectuses of land legislation in force were provided in Year Book No. 48 and previous issues (*see also* Year Book No. 50, page 85).

#### Disposal of Crown lands

For a description of the provisions that exist in all mainland States for the disposal of Crown lands for public purposes, for unconditional purchase and occupation under lease or licence, *see* Year Book No. 61, page 742.

#### Closer settlement and war service settlement

Particulars of these are given in issues of the Year Book up to No. 22, and in Year Book Nos. 48, 55 and 61.

#### Alienation and occupation of Crown lands

For data relating to Land Tenures, in the States and Territories, *see* Year Book No. 66, page 285 and Year Book No. 67, page 321.

### Land utilisation in Australia

The total area under tenure differs from the total area of agricultural establishments (shown below) by amounts which represent unused land or land held for non-agricultural purposes. In general, land in the more fertile regions tends to be mostly freehold, while the less productive land is held under Crown lease or licence.

#### AREA OF ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY

(Million hectares)

<i>At 31 March</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas</i>	<i>N.T.</i>	<i>Aust. (incl. A.C.T.)</i>
1980 . . . . .	65.0	14.7	157.7	62.8	114.9	2.2	78.2	495.6
1981 . . . . .	65.2	14.7	157.5	62.4	115.8	2.2	77.6	495.4
1982 . . . . .	63.4	14.4	157.1	62.9	113.5	2.2	77.1	490.8
1983 . . . . .	64.0	14.2	155.9	60.2	112.0	2.2	75.2	483.8
1984 . . . . .	64.0	14.3	158.1	62.1	114.3	2.2	71.7	486.6
1985p . . . . .	64.3	14.1	158.3	60.6	113.9	2.1	73.8	487.1

#### LAND UTILISATION: AUSTRALIA

(Million hectares)

<i>Year</i>	<i>Area of</i>		<i>Balance (c)</i>	<i>Total</i>		<i>Percentage of Australian land area (768,284,000 hectares)</i>
	<i>crops (a) (b)</i>	<i>sown pastures and grasses (b)</i>		<i>Area of establishments</i>		
1979-80 . . . . .		18.0	27.1	450.6	495.6	64.5
1980-81 . . . . .		18.3	24.9	452.3	495.4	64.5
1981-82 . . . . .		19.6	26.9	444.2	490.8	63.9
1982-83 . . . . .		19.4	25.6	438.8	483.8	63.0
1983-84 . . . . .		22.0	26.1	438.5	486.6	63.3
1984-85p . . . . .		21.0	27.6	438.6	487.1	63.3

(a) Excludes pastures and grasses harvested for hay and seed which have been included in 'sown pastures and grasses'.

(b) Prior to 1981-82 figures related to area 'used for' crop or pasture, i.e., an area used for more than one purpose during the year was counted only once. From 1981-82, an area double cropped or an area of pasture also planted to crop has been counted separately each time used.

(c) Used for grazing, lying idle, fallow, etc.

The total area of agricultural establishments in 1984-85 constituted 63.3 per cent of the Australian land area, the remainder being urban areas, State forests and mining leases, with an overwhelming proportion of unoccupied land (mainly desert). The balance data includes large areas of arid or rugged land held under grazing licences but not always used for grazing. Balance data also includes variable amounts of fallow land.

The crop area data represents up to 4.3 per cent of the area of agricultural establishments and emphasises the relative importance of the livestock industry in Australia. The agricultural labour force (*see* page 303) is used on large areas of land with low carrying capacity.

### Crops

For this section, statistics relating to crop areas and production have been obtained from the annual Agricultural Census. The census returns are collected in all States and the two Territories at 31 March each year and relate mainly to crops sown in the previous twelve months.

Where harvests are not completed by March (e.g. potatoes), provision is made in some States for a supplementary collection after the harvest is completed. Additional statistics relating to value of agricultural commodities produced, manufactured production and overseas trade are also included. Agricultural Census data published in this section refer to the 'agricultural' year ended 31 March, while other data refer to the year ended 30 June; but for most purposes there will be little error involved in considering 'agricultural year' data as applying to the financial year.

The following table shows the area of crops in each of the States and Territories of Australia since 1860-61.

AREA OF CROPS (a): 1860-61 TO 1984-85  
(\*000 hectares)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas	N.T.	A.C.T.	Aust.
1860-61	100	157	2	145	10	62	-	-	475
1870-71	156	280	21	325	22	64	-	-	868
1880-81	245	627	46	846	26	57	-	-	1,846
1890-91	345	822	91	847	28	64	-	-	2,197
1900-01	990	1,260	185	959	81	91	-	-	3,567
1910-11	1,370	1,599	270	1,112	346	116	-	-	4,813
1920-21	1,807	1,817	316	1,308	730	120	-	1	6,099
1930-31	2,756	2,718	463	2,196	1,939	108	1	2	10,184
1940-41	2,580	1,808	702	1,722	1,630	103	-	2	8,546
1949-50	2,295	1,881	832	1,518	1,780	114	-	4	8,424
1954-55	2,183	1,904	1,049	1,711	2,069	122	-	2	9,040
1959-60	2,888	1,949	1,184	1,780	2,628	130	1	3	10,564
1964-65	4,182	2,621	1,605	2,414	3,037	163	2	4	14,028
1969-70	4,999	2,212	2,208	2,290	3,912	98	6	2	15,728
1970-71	3,967	1,732	1,791	1,998	3,826	80	2	1	13,397
1971-72	4,186	1,925	2,017	2,278	3,751	67	7	1	14,231
1972-73	4,329	1,943	1,963	2,122	3,814	80	12	1	14,265
1973-74	4,628	1,981	1,786	2,451	4,133	74	6	1	15,060
1974-75	4,089	1,772	1,898	2,257	3,754	67	7	1	13,845
1975-76	4,285	1,851	2,010	2,116	4,208	60	8	1	14,539
1976-77	4,520	1,943	2,026	2,036	4,417	65	2	1	15,010
1977-78	4,984	2,163	2,107	2,564	4,910	70	1	1	16,800
1978-79	5,020	2,209	2,307	2,827	4,993	80	2	1	17,438
1979-80	5,243	2,243	2,334	2,771	5,281	79	2	1	17,954
1980-81	5,208	2,180	2,481	2,772	5,547	84	1	1	18,273
1981-82	5,744	2,184	2,765	2,865	5,963	90	2	1	19,613
1982-83	5,200	2,234	2,648	2,856	6,380	98	3	1	19,420
1983-84	6,566	2,655	2,998	3,108	6,526	101	5	1	21,961
1984-85p	5,708	2,561	3,010	2,893	6,721	99	4	1	20,997

(a) The classification of crops was revised in 1971-72 and adjustments made to statistics back to 1967-68. After 1966-67 lucerne for green feed, hay and seed, and pasture cut for hay and harvested for seed or green feed are excluded.

NOTE: From 1970-71 to 1980-81 figures related to area 'used for' crops, i.e. an area used for more than one purpose during the year was counted only once. From 1981-82, an area double cropped has been counted separately each time used.

The wide range of climatic and soil conditions over the agricultural regions of Australia has resulted in a diversity of crops being grown throughout the country. Generally, cereal crops (excluding rice, maize and sorghum) are grown in all mainland States over wide areas, while other crops are confined to specific locations in a few States. However, scanty or erratic rainfall, limited potential for irrigation and unsuitable soils or topography have restricted intensive agriculture. Despite this, agricultural production has increased over time to meet increased demands both in Australia and from overseas.

The following table provides an Australian summary of the area, production and gross value of the principal crops.

CROPS: AREA, PRODUCTION AND GROSS VALUE

	1982-83		1983-84			1984-85			Gross value (\$m)
	Area ('000 ha)	Production ('000 tonnes)	Gross value (\$m)	Area ('000 ha)	Production ('000 tonnes)	Gross value (\$m)	Area ('000 ha)	Production ('000 tonnes)	
<b>Cereals for grain—</b>									
Barley . . . . .	2,452	1,939	291	3,109	4,890	734	3,503	5,559	773
Grain sorghum . . . . .	707	958	124	730	1,885	246	710	n.y.a.	203
Maize . . . . .	64	139	23	68	238	36	104	n.y.a.	n.y.a.
Oats . . . . .	1,212	848	116	1,772	2,296	204	1,060	1,395	128
Rice . . . . .	85	548	88	119	642	89	118	n.y.a.	100
Wheat . . . . .	11,520	8,876	1,566	12,931	21,764	3,606	12,039	18,635	3,504
<b>Legumes for grain . . . . .</b>									
	407	238	40	510	521	96	776	n.y.a.	184
<b>Crops for hay—</b>									
Oats . . . . .	273	645	73	279	994	80	183	637	n.y.a.
Wheat . . . . .	106	202	22	71	209	15	55	171	n.y.a.
<b>Crops for green feed, silage—</b>									
Barley . . . . .	117	n.a.	n.a.	58	n.a.	n.a.	54	n.a.	n.a.
Forage sorghum . . . . .	112			72			72		
Oats . . . . .	723			611			564		
Wheat . . . . .	130			23			29		
Sugar cane cut for crushing	318	24,817	509	307	24,194	517	306	25,448	500
Tobacco . . . . .	7	13	62	7	14	71	9	n.y.a.	67
Cotton . . . . .	96	286	168	137	401	269	151	n.y.a.	317
Peanuts . . . . .	36	23	18	32	47	40	26	n.y.a.	38
Linseed . . . . .	5	2	1	5	4	1	7	7	2
Rapeseed . . . . .	12	7	2	18	17	5	29	31	8
Safflower . . . . .	12	5	2	55	31	8	44	29	7
Sunflower . . . . .	176	104	28	234	170	59	311	n.y.a.	8
Fruit (excl. grapes) . . . . .	104	—	509	108	—	430	109	—	627
<b>Fruit—</b>									
Orchard . . . . .	87	—	385	90	—	418	90	—	n.y.a.
Oranges . . . . .	n.a.	410	101	n.a.	392	105	n.a.	439	n.y.a.
Apples . . . . .		301	132		267	134		n.y.a.	
Pears . . . . .		119	42		122	46		n.y.a.	
Peaches . . . . .		63	21		48	25		59	
Bananas . . . . .	9	140	70	9	146	87	9	151	n.y.a.
Pineapples . . . . .	6	111	25	6	115	26	7	135	n.y.a.
Grapes . . . . .	66	768	213	65	843	217	65	n.y.a.	199
<b>Vegetables</b>									
Potatoes . . . . .	110	—	557	113	—	739	108	—	625
	37	858	169	38	1,020	290	38	n.y.a.	174
<b>Total, all crops (excluding pastures)</b>	<b>19,420</b>	<b>—</b>	<b>4,705</b>	<b>21,961</b>	<b>—</b>	<b>7,901</b>	<b>20,997</b>	<b>—</b>	<b>n.y.a.</b>

In the tables that follow, crop statistics are shown in these groupings: wheat, coarse grains, rice, oilseeds, sugar, vegetables, fruit, grapes and other crops such as tobacco, mushrooms and fodder crops.

**Cereal grains**

In Australia, cereals are conveniently divided into autumn-winter-spring growing ('winter' cereals) and spring-summer-autumn growing ('summer' cereals). Winter cereals such as wheat, oats, barley and rye are usually grown in rotation with some form of pasture such as grass, subterranean clover, medics or lucerne. In recent years, alternative winter crops such as rapeseed, field peas and lupins have been introduced to cereal rotation in areas where they had not previously been grown. Rice, maize, sorghum and the millets are summer cereals with the latter two being grown in association with winter cereals in some areas. In Northern Queensland and Western Australia there are two rice growing seasons—a dry season winter crop and a wet season summer crop.

Cereals for grain form a significant percentage of both the value of Australia's agricultural commodities and of the country's export earnings. The following table shows the significance of cereal grains in the last 6 years.



## CEREAL GRAINS IN AUSTRALIA: A PERSPECTIVE

Year	Cereal grains(a)		Total agriculture gross value	Total Australian exports— all produce value f.o.b.	Gross	Export
	Gross value	Export value f.o.b.			value of cereal grains as a percentage of gross value of agriculture	value of cereal grains as a percentage of total Australian exports
	\$m	\$m	\$m	\$m	per cent	per cent
1979-80 . . . . .	3,245.4	2,764.7	11,764	18,870	27.6	14.7
1980-81 . . . . .	2,532.0	2,160.6	11,610	19,169	21.8	11.3
1981-82 . . . . .	3,512.6	2,367.9	12,708	19,581	27.6	12.1
1982-83 . . . . .	2,233.6	1,669.7	11,719	22,123	19.1	7.6
1983-84 . . . . .	4,952.1	2,564.9	15,317	23,510	32.3	10.9
1984-85p . . . . .	4,804.6	4,007.5	15,421	29,270	31.2	13.7

(a) Principally wheat, barley, oats, grain sorghum, rice and maize, with panicum/millet, canary seed and rye being minor cereals.

For more up-to-date and detailed information on cereals for grain see the following publications:

*Agricultural Industries: Structure of Operating Units, Australia (7102.0); Agricultural Land Use and selected Inputs, Australian (7411.0); Principal Agricultural Commodities, Australia (preliminary) (7111.0); Selected Agricultural Commodities, Australia (Preliminary) (7112.0); Crops and Pastures, Australia (7321.0); Cereal Grains: Estimates of Area Sown, Australia (7312.0); Value of Principal Agricultural Commodities Produced: Australia, First Estimates (7501.0); Value of Selected Agricultural Commodities Produced: Australia, Second Estimates (7502.0); Value of Agricultural Commodities Produced, Australia (7503.0).*

### Wheat

Wheat is grown in all States except the Northern Territory, and is the most important crop in Australia in terms of area, production and value of exports. Factors which have contributed to the development of the industry are the increasing demand from and the organisation of overseas markets, the existence of statutory marketing arrangements including stabilised or guaranteed pricing, agronomic and plant breeding research and the availability of suitable cropping land. As a large proportion (70-80 per cent) of the wheat crop is exported, wheat marketing arrangements play an important role. The Australian Wheat Board (AWB) was constituted in September 1939, under *National Security (Wheat Acquisition) Regulations*, to purchase, sell or dispose of wheat or wheat products and to manage or control all matters connected with the handling, storage, protection, shipment, etc of wheat acquired and such other matters as were necessary to give effect to the regulations. At the end of World War II the Board continued to operate under extensions to these regulations, until 1948, when the Commonwealth and States agreed to national marketing arrangements. After a poll of growers had approved the plan the necessary complementary legislation was passed by the Commonwealth and the States. The *Wheat Industry Stabilization Act 1948* established the present Australian Wheat Board to acquire and market all wheat and to administer the first stabilisation plan. A stabilisation fund made up of a charge on exports and supplemented by Government payments provided growers with a 'guaranteed price' for a specific quantity of export wheat. Until 1979 there were six Stabilisation Plans. The *Wheat Marketing Act 1979* replaced the stabilisation plans with a guaranteed minimum price scheme, applicable to an unlimited quantity of wheat. Amendments to this legislation in 1982 and 1983 gave the board additional powers in financial matters, including the ability to operate on futures markets and borrow money outside Australia.

*Wheat marketing and pricing arrangements 1984-85 to 1988-89.* On 25 October 1984 the *Wheat Marketing Act 1984* received Royal Assent and new wheat marketing and pricing arrangements became operative for the period ending 30 June 1989. The basic elements of the new arrangements were negotiated between the Australian Wheatgrowers' Federation and Commonwealth and State Governments. The enactment of State legislation complementary to the Commonwealth legislation was necessary for the implementation of a national scheme.

The new wheat marketing and pricing provisions contain most features of the previous scheme, the most important of which are: the Australian Wheat Board continues as a statutory authority responsible for the marketing of wheat in Australia and overseas although it can now issue permits for the domestic sale of stockfeed wheat outside the pooling arrangements; the general powers of the Board remain largely unchanged; the legislation applies to a seven-year period, except for the pricing provisions, which run for five years (approximately); and the concept of a guaranteed minimum price is retained.

The following are important features in the current plan.

*Guaranteed Minimum Price.* Under the 1984 Act, the Commonwealth Government continues to underwrite 95 per cent of wheat returns on a net basis through a Guaranteed Minimum Price (GMP) for Australian Standard White (ASW) wheat, although the method of calculating and the timing of payment of the GMP has been changed. The ASW GMP is to be set at 95 per cent of the average of the estimated gross return per tonne for ASW wheat from the subject season and the lowest two of the previous three seasons less the estimated pool costs per tonne for the subject season. There is provision in the Act for separate GMPs to be established for specified categories other than ASW, based on the expected market value of the wheat in those categories relative to ASW.

Growers will receive a split first advance payment. Upon delivery of his wheat, a grower will be paid 90 per cent of the estimated GMP for the relevant category (i.e. 90 per cent of the relevant preliminary GMP) less contributions to research (wheat tax), dockages for non-preferred varieties and for defects (if any), and allowances for storage, handling and transportation charges. When the final GMP has been determined (before 1 March during the subject season), the grower receives the final GMP, increased or decreased by an allowance for the quality of wheat (in addition to the deductions made at the time of delivery), less the interim advance payment already received. Initial allowances may be adjusted by the Board at a later date to reflect actual costs and returns. If the net return per tonne exceeds the GMP, the excess is returned to growers by way of a final payment, which may be made by instalments over a number of years.

These arrangements provide the industry with support from the Government that is designed to help it overcome any short-run down-turn in producers' returns, modified by longer-run adjustments in market returns whether these adjustments be for a rising or a falling market. To date, it has not been necessary for the Government to meet any deficiency between the net pool return rate and the GMP.

For the 1984-85 season, the preliminary GMP is \$145.35 per tonne for ASW wheat. Four additional categories have been specified with preliminary guaranteed minimum prices ranging from \$100.35 to \$155.35.

*Financial Arrangements.* Prior to the 1978-79 season, the Board's borrowing was limited to Reserve Bank of Australia Rural Credits Department borrowings. In that season approval was granted for partial borrowings on the domestic money market. In 1981-82 and 1982-83 funding was moved exclusively to the domestic money market. For 1983-84 the Minister for Primary Industry approved the AWB borrowing up to 50 per cent of its prospective net borrowing requirement overseas, and up to 50 per cent on the domestic money market. Commencing in 1984-85, the AWB may, with the Minister's approval, borrow overseas up to an amount equal to the aggregate size of expected foreign currency denominated sales in respect of a particular season, provided that amount does not exceed that season's net financing requirement.

The Wheat Finance Fund, a \$100 million revolving fund of growers' moneys, was wound up on 1 July 1985 with the repayment of grower contributions and accumulated interest. The Fund had never been used for its originally intended purpose of refinancing outstanding loans from the Reserve Bank.

*Domestic Pricing.* The arrangements for the pricing of wheat sold on the domestic market recognise the different segments of the market, namely, the use of wheat for milling into flour for human consumption and the use of wheat for stockfeed and for industrial purposes.

The 1984 Act changed the method of setting the domestic price for human consumption wheat. The price is now determined each quarter by averaging the export prices for the forward and past quarters and adding a margin to cover the additional costs of servicing the domestic market. The prices for the four quarters from October 1984 ranged from \$195.25 per tonne to \$229.76 per tonne, including \$1.40 per tonne Tasmanian freight levy. This levy now applies to all domestic wheat sales. It is used exclusively to cover the cost of shipping wheat from the mainland to Tasmania each season.

Domestic prices for industrial and stockfeed wheats are quoted by the Board in the light of its commercial judgment and having regard to orderly marketing considerations. Prices are quoted each day and are related to export prices. Buyers may enter into contracts to fix the price of wheat for delivery up to six months in advance.

*Domestic Marketing Arrangements.* The Australian Wheat Board controls the domestic marketing of wheat although domestic stockfeed wheat may be directly sold by growers to buyers under a permit issued by the Board. The availability of these permits is governed by guidelines issued by the Federal Minister for Primary Industry and the relevant State Ministers. Wheat sold pursuant to a stockfeed purchase permit is subject to a deduction to cover wheat research tax, Tasmanian freight, the Board's administration costs and a reduced bulk handling authority charge. No pooling or GMP provisions or minimum or maximum prices apply in respect of such wheat.

The Board may also authorise a grower to sell wheat on behalf of the Board under grower-to-buyer direct delivery transactions. The grower and buyer negotiate the sale price, which may be at a premium or a discount to the Board's domestic ASW price applicable for the same end use. The proceeds of sale are incorporated in the Board's pooling arrangements.

The grower receives payment from the Board as if he had delivered ASW wheat, adjusted by the abovementioned discount or premium and a reduction in the relevant bulk handling authority's charge.

Wheat which is retained by a grower for his own use does not come under the control of the Board.

The Board has power to import wheat for use on the domestic market.

*Overseas Marketing Arrangements.* Under the 1984 Act, the Board maintains sole authority for the export of wheat but no longer controls the export of wheat products. The Act extends the powers of the Board in relation to overseas marketing to enable it to enter into tripartite barter arrangements and the sale and shipment of other grains in combination with wheat.

#### **Wheat varieties and standards of wheat**

The practice of breeding wheat suitable to local conditions has long been established in Australia. William Farrer (1845-1905) did invaluable work in pioneering this field and the results of his labour and the continued efforts of those who have followed him have proved of immense benefit to the industry. Their efforts have resulted in the development of disease-resistant varieties with higher yields and improved quality which, when combined with a greater uniformity of sample, have created certain marketing advantages for Australia's wheat crop. The continuation of wheat breeding activities has led to expansions in the areas sown to wheat as well as in yields per hectare, but it is difficult to distinguish progress due to improved wheat varieties from that due to crop/pasture rotations, increased mechanisation and superphosphate-improved pastures.

Wheat quality is a complex subject but can be broadly described in terms of four measurements; grain hardness, protein content, milling performance and physical dough properties. These characteristics are governed by a combination of the wheat variety and the environmental conditions under which the wheat is grown.

Australia produces only white grained wheats. This is in contrast to our major competitors who predominantly produce red-grained wheats. Within the Australian wheatbelt there exist wide ranges of soil fertility, rainfall, day length and temperature. Through the development of varieties which complement these diverse growing conditions, it has been possible to produce wheats with qualities that are suitable to virtually all commercial applications.

Australian wheats may be classified into two broad types, namely the milling and non-milling classes. Since 1974 there have been five classes of Australian wheats suitable for milling purposes:

- Australian Prime Hard
- Australian Hard
- Australian Standard White (ASW)
- Australian Soft
- Australian Durum

There exists within each class a number of individual grades. In some seasons a total in excess of 30 different grades of Australian wheat have been marketed. This large number has developed to meet individual customer requirements and also to reflect the wide range of wheat types available from Australia. Prior to 1974 most of the Australian wheat crop was marketed under the single classification Fair Average Quality (F.A.Q.). Particulars of Australian wheat standards may be found in *Crops and Pastures, Australia* (7321.0).

**Central Grain Research Laboratory**

In 1976, the Australian Wheat Board established this laboratory in Sydney as an addition to the facilities of the Bread Research Institute of Australia. The main functions of the laboratory are to test and report on the Australian crop, to analyse and compare competitor wheats from other countries and to develop research programs to aid the marketing of wheat.

**WHEAT: AREA, PRODUCTION AND RECEIVALS**

Season	Area (a)		Production (a)		Australian Wheat Board receipts (b)
	For grain	All purposes	Grain	Gross value	
	'000 ha	'000 ha	'000 tonnes	\$m	'000 tonnes
1979-80 . . . . .	11,153	11,249	16,188	2,478.0	15,328
1980-81 . . . . .	11,283	11,436	10,856	1,684.1	10,059
1981-82 . . . . .	11,885	11,995	16,360	2,599.4	(b) 15,545
1982-83 . . . . .	11,520	11,755	8,876	1,566.2	7,927
1983-84 . . . . .	12,931	13,025	21,764	3,605.6	21,059
1984-85p . . . . .	12,039	12,123	18,635	3,503.8	17,500

(a) Area and production data relate to the year ending 31 March. (b) Due to amendments to the Wheat Marketing Act 1979, the AWB has changed from a December-November to an October-September crop year. To facilitate this transition, 1981-82 was a 10 month (December-September) reporting period.

**WHEAT FOR GRAIN: AREA AND PRODUCTION, BY STATE**

Season	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia
AREA ('000 hectares)							
1979-80 . . . . .	3,415	1,457	733	1,424	4,121	2	11,153
1980-81 . . . . .	3,345	1,431	727	1,445	4,333	2	11,283
1981-82 . . . . .	3,600	1,322	941	1,427	4,593	1	11,885
1982-83 . . . . .	3,162	1,327	767	1,398	4,865	1	11,520
1983-84 . . . . .	3,999	1,614	1,006	1,564	4,781	2	12,931
1984-85p . . . . .	3,564	1,530	918	1,376	4,649	2	12,039
PRODUCTION ('000 tonnes)							
1979-80 . . . . .	6,000	3,250	846	2,349	3,739	4	16,188
1980-81 . . . . .	2,865	2,538	485	1,650	3,315	3	10,856
1981-82 . . . . .	5,910	2,467	1,482	1,695	4,803	2	16,360
1982-83 . . . . .	1,499	394	754	692	5,534	1	8,876
1983-84 . . . . .	8,961	3,971	1,922	2,590	4,316	3	21,764
1984-85p . . . . .	5,813	2,660	1,540	2,038	6,580	4	18,635

**PRODUCTION AND DISPOSAL OF WHEAT**

( '000 tonnes)

	1982	1983	1984
<b>Year ended 31 March—</b>			
Production . . . . .	16,360	8,876	21,764
Balance held on farm for seed, feed and other uses . . . . .	829	949	596
<b>Year ended 30 September(a)—</b>			
Wheat received (incl. net early season deliveries) . . . . .	15,545	7,927	21,059
Carryin . . . . .	2,044	4,879	2,285
<i>Total availability for export, domestic disposal and carryover.</i> . . . .	<i>17,589</i>	<i>12,806</i>	<i>23,344</i>
Exports of wheat, flour and wheat products . . . . .	11,068	7,280	14,159
Domestic disposals . . . . .	1,628	3,241	1,674
<i>Total disposals</i> . . . . .	<i>12,696</i>	<i>10,521</i>	<i>15,833</i>

(a) Source: Australian Wheat Board (AWB). Due to amendments to the Wheat Marketing Act 1979, the AWB has changed from a December-November to an October-September crop year. To facilitate this transition, 1981-82 was a 10 month (December-September) reporting period.

### Wheat pools

Details of wheat receipts by State of origin for the several Pools together with Pool payments and times of payment will be found in the latest issue of *Crops and Pastures, Australia* (7321.0).

### International Wheat Agreement

A number of Agreements have operated since 1949 to provide a valuable framework for continuing international consultation and co-operation on world wheat matters, including the regular monitoring of the world wheat situation. The 1971 International Wheat Agreement (the first expiring on 30 June 1974) has been extended seven times by protocol, the most recent extension expiring on 30 June 1986. It comprises two separate legal instruments, the Wheat Trade Convention and the Food Aid Convention, linked by a common preamble. Negotiations towards a new Agreement were held in January 1978 and January-February 1979 under the auspices of the United Nations Conference on Trade and Development (UNCTAD). No consensus was reached on an Agreement with economic provisions designed to bring about a measure of price stability by the accumulation and release of internationally co-ordinated nationally-held reserve stocks. The 1979 conference was adjourned indefinitely. Subsequently, in 1980 and 1981, the International Wheat Council considered other possible bases for an Agreement with its attention focussing on a more flexible approach to stock-holding with reserve stock action being taken on the basis of a consensus within the Council rather than applying automatically at a particular time as a result of price movements. With strong opposition of the United States Administration to the international co-ordination of holding of wheat, this approach proved not negotiable. However, the Council agreed, in December 1981, on immediate steps to strengthen the operation of the existing Agreement. The Council also decided that it was imperative to continue the search for an agreed basis for a new Agreement, keeping in view the paramount objectives of market stability and food security. At the 1984 session some members of the International Wheat Council re-emphasised the need for the Council to vigorously pursue efforts towards the conclusion of a new agreement with appropriate provisions to meet the aspirations of developing countries. This led to the formation by the International Wheat Council in December 1984 of a Working Group to consider future action on the Wheat Trade Convention. The Working Group is considering a draft Wheat Trade Convention 1986, which strengthens and improves the 1971 Convention. In particular, unworkable economic provisions of the previous Convention have been deleted, overcoming possible objections of some participants. In the meantime the current Agreement runs to 1986.

WHEAT EXPORTS: A COMPARISON WITH OTHER EXPORT COMMODITIES(a)

Year	Wheat for grain: Export		Total Australian exports— all produce: Value f.o.b.	Export value of wheat for grain as a percentage of total Australian exports
	Quantity '000 tonnes	Value f.o.b. \$m	\$m	per cent
1979-80 . . . . .	14,876	2,176.8	18,870	11.5
1980-81 . . . . .	10,552	1,729.4	19,169	9.0
1981-82 . . . . .	10,912	1,719.7	19,581	8.8
1982-83 . . . . .	8,022	1,343.1	22,060	6.1
1983-84 . . . . .	10,535	1,813.8	24,781	7.3
1984-85p . . . . .	16,649	2,785.7	29,270	9.5

(a) These statistics exclude re-exports.

## WORLD WHEAT: AREA AND PRODUCTION

Source: International Wheat Council, *World Wheat Statistics, 1984*

	Area (million hectares)			Production (million tonnes)		
	1982-83	1983-84p	1984-85p	1982-83	1983-84p	1984-85p
Europe . . . . .	26.2	27.1	n.y.a.	103.1	103.3	n.y.a.
EEC (10) . . . . .	13.0	13.2	n.y.a.	59.9	59.3	76.3
U.S.S.R. . . . .	57.3	50.9	n.y.a.	85.0	80.0	75.0
North & Central America . . . . .	45.6	39.5	n.y.a.	107.8	96.4	96.4
Canada . . . . .	12.6	13.7	n.y.a.	26.8	26.9	21.2
U.S.A. . . . .	32.0	24.9	n.y.a.	76.5	66.0	70.6
South America . . . . .	11.1	9.7	n.y.a.	18.0	15.9	17.1
Asia . . . . .	79.5	81.4	n.y.a.	150.3	169.2	n.y.a.
China (a) . . . . .	27.9	28.5	n.y.a.	68.4	81.4	87.8
India . . . . .	22.1	23.2	n.y.a.	37.5	42.5	45.1
Iran . . . . .	6.0	6.0	n.y.a.	6.5	6.5	6.0
Pakistan . . . . .	7.1	7.3	n.y.a.	11.1	12.4	10.9
Turkey . . . . .	9.4	9.2	n.y.a.	17.5	16.4	17.2
Africa . . . . .	8.0	7.9	n.y.a.	10.0	8.8	9.2
Oceania . . . . .	11.6	13.0	n.y.a.	9.2	22.4	18.9
Australia . . . . .	11.5	12.9	12.0	8.9	22.1	18.6
<b>Total world</b> . . . . .	<b>239.3</b>	<b>229.5</b>	<b>n.y.a.</b>	<b>483.5</b>	<b>496.0</b>	<b>n.y.a.</b>

(a) Excludes Taiwan Province; FAO estimates.

NOTE 1. Crop years shown cover northern hemisphere harvests combined with those of the southern hemisphere which immediately follow.

2. The 10 members of the EEC are: Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg, Netherlands and the United Kingdom.

**Coarse grains**

In the late sixties and early seventies, restrictions on wheat deliveries and low returns in the sheep industry caused a resurgence of interest in coarse grain crops and the newer oilseed crops. The resultant higher level of plantings and production has been maintained, despite the lifting of wheat delivery quotas and a general improvement in market prospects for wheat, wool and meat.

**Oats**

Oats are traditionally a cereal of moist temperate regions. However, improved varieties and management practices have enabled oats to be grown over a wide range of soil and climatic conditions. They have a high feed value and produce a greater bulk of growth than other winter cereals; they need less cultivation and respond well to superphosphate and nitrogen. Oats have two main uses: as a grain crop, or as a fodder crop, (following sowing or fallow or rough sowing into stubble or clover pastures). Fodder crops can either be grazed and then harvested for grain after removal of livestock or else mown and baled or cut for chaff. Oats produced in New South Wales are marketed through a statutory board while the Victorian Oatgrowers' Pool and Marketing Company Ltd and private merchants market the bulk of oats produced in Victoria. In South Australia the Barley Marketing Act was amended in 1977 to give the Australian Barley Board powers over oat marketing in that State. Under the legislation amendments the Board controls export sales and grain resold on the local market; however, direct sales between producers and consumers are outside the Board's supervision. In Western Australia, oats are marketed under a warehousing system operated by Co-operative Bulk Handling Ltd.

Oats are usually next in importance to wheat and barley among the grain crops. About three-quarters of the crop is used domestically as stockfeed or for human consumption.

**OATS FOR GRAIN: AREA, PRODUCTION AND EXPORTS**

Year	Area	Production		Exports	
		Quantity	Gross value	Quantity	Value f.o.b.
	'000 ha	'000 tonnes	\$m	'000 tonnes	\$m
1979-80 . . . . .	1,123	1,411	98.8	472	43.8
1980-81 . . . . .	1,093	1,128	139.5	196	27.7
1981-82 . . . . .	1,388	1,617	155.7	153	24.1
1982-83 . . . . .	1,212	848	116.1	83	13.2
1983-84 . . . . .	1,772	2,296	203.8	289	40.9
1984-85p . . . . .	1,060	1,395	128.0	391	49.0

**Barley**

This cereal contains two main groups of varieties, 2-row and 6-row. The former is generally, but not exclusively, preferred for malting purposes. Barley is grown principally as a grain crop although in some areas it is used as a fodder crop for grazing with grain being subsequently harvested if conditions are suitable. It is often grown as a rotation crop with wheat, oats and pasture. When sown for fodder, sowing may take place either early or late in the season, as it has a short growing period. It may thus provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock or sold for malting.

Crops sown for malting purposes require a combination of light textured soil of moderate fertility, reliable rainfall, and mild weather during ripening. The main barley-growing areas in Australia are situated in South Australia, but considerable quantities are grown also in New South Wales, Western Australia, Victoria and Queensland. In December 1980 a joint Commonwealth/Industry research scheme for the barley industry commenced operation. The scheme is financed by a levy on barley production and a Commonwealth contribution not exceeding the total of the levy.

Barley is marketed by statutory marketing authorities in each of the mainland States. The Australian Barley Board controls marketing in both South Australia and Victoria while separate authorities operate in the three other States.

**BARLEY FOR GRAIN: AREA, PRODUCTION AND EXPORTS**

Year	Area	Production				Exports	
		2-row	6-row	Total		Quantity	Value f.o.b.
				Quantity	Gross value		
	'000 ha		— '000 tonnes—		\$m	'000 tonnes	\$m
1979-80 . . . . .	2,482	3,545	159	3,703	449.8	2,962	353.5
1980-81 . . . . .	2,451	2,563	119	2,682	380.9	1,598	242.7
1981-82 . . . . .	2,685	3,252	198	3,450	463.4	1,577	241.3
1982-83 . . . . .	2,452	1,785	153	1,939	290.8	834	131.4
1983-84 . . . . .	3,109	4,585	305	4,890	734.0	3,121	499.4
1984-85p . . . . .	3,503	5,196	364	5,559	772.7	5,345	778.3

**Grain sorghum**

The sorghums are summer growing crops which are used in three ways: grain sorghum for grain; sweet or fodder sorghum, sudan grass and, more recently, columbus grass for silage, green feed and grazing; and broom millet for brooms and brushware.

Grain sorghum has been grown extensively only in the last two decades. Rapid increases in production have resulted in a substantial increase in exports over this period. The grain is used primarily as stockfeed and is an important source for supplementing other coarse grains for this purpose.

The climatic conditions of Queensland and northern New South Wales are particularly suited to the growing of sorghum. In Queensland, grain sorghum production is concentrated in the Darling Downs, Fitzroy and Wide Bay-Burnett Divisions. In New South Wales, the northern and north-western slopes and plains are the main areas.

In Queensland, a degree of orderly marketing is ensured by the operation of the Central Queensland Grain Sorghum Marketing Board (a statutory authority in a defined area in central Queensland). A State statutory marketing board handles sorghum grown in New South Wales.

**GRAIN SORGHUM: AREA, PRODUCTION AND EXPORTS**

Year	Area	Production		Exports	
		Quantity	Gross value	Quantity	Value f.o.b.
	'000 ha	'000 tonnes	\$m	'000 tonnes	\$m
1979-80 . . . . .	518.6	922.0	96.1	580.4	59.8
1980-81 . . . . .	657.9	1,203.9	152.0	462.7	57.5
1981-82 . . . . .	648.6	1,316.7	140.1	1,270.9	152.8
1982-83 . . . . .	706.5	958.0	124.4	445.0	53.9
1983-84 . . . . .	730.3	1,885.5	246.3	772.1	110.7
1984-85p . . . . .	709.7	n.y.a.	203.3	1,568.5	242.0

## Maize

Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. Maize for grain is almost entirely confined to the south-east regions and Atherton Tablelands of Queensland; and the north coast, northern slopes and tablelands and the Murrumbidgee Irrigation Area in New South Wales. Small amounts are grown in all States, except South Australia, for green feed and silage, particularly in association with the dairy industry.

A statutory board controls the marketing of maize in the Atherton Tablelands area of Queensland. A large proportion of the crop is sold directly to food processors.

### MAIZE: AREA, PRODUCTION AND EXPORTS

Year	Area	Production		Exports	
		Quantity	Gross value	Quantity	Value f.o.b.
	'000 ha	'000 tonnes	\$m	'000 tonnes	\$m
1979-80	54.1	150.9	19.8	7.7	0.9
1980-81	56.5	172.8	26.1	29.1	3.4
1981-82	61.0	212.4	29.6	14.2	1.9
1982-83	64.3	139.1	23.3	18.3	2.4
1983-84	68.4	238.2	35.6	19.0	2.8
1984-85p	103.8	n.y.a.	n.y.a.	139.8	24.9

## Rice

In Australia, rice was first grown commercially in 1924-25 in the Murrumbidgee Irrigation Area, one of three irrigation areas in southern New South Wales where rice is now produced. Today, about 96 per cent of Australia's rice is grown in New South Wales. The remainder is grown in the Burdekin River basin and at Mareeba in Northern Queensland.

Rice is a summer growing crop in N.S.W. The combination of irrigation water and the relatively cloudless days characteristic of summers in temperate regions of the world is the main contributing factor to the very high yields per hectare often achieved by N.S.W. growers. In Queensland, a winter and a summer crop are grown.

State statutory marketing boards are responsible for the marketing of the N.S.W. and Queensland crops.

### RICE: AREA, PRODUCTION AND EXPORTS

Year	Area	Production		Exports	
		Quantity(a)	Gross value	Quantity	Value f.o.b.
	'000 ha	'000 tonnes	\$m	'000 tonnes	\$m
1979-80	116.4	613.2	93.8	457.3	129.9
1980-81	103.9	727.5	138.2	281.3	99.9
1981-82	122.9	853.9	103.5	596.3	195.4
1982-83	84.8	547.7	88.4	404.7	120.3
1983-84	119.0	632.2	88.9	245.6	91.9
1984-85p	118.4	776.5	100.0	341.2	121.6

(a) In terms of paddy (or rough) rice.

## Oilseeds

### Specialised Oilseeds

The oilseeds industry is a relatively young industry by Australian agricultural standards. Production has increased rapidly in recent years following changes in relative profitability and agronomic advances.

Irregular seasonal conditions in 1984-85 favoured the sowing of summer oilseeds over winter cereals and production of oilseeds rose to record levels. Production is forecast to fall slightly in 1985-86 given average seasonal conditions.

The expected profitability of oilseeds relative to crops such as wheat and coarse grains will continue to influence future production levels in the industry. This profitability will be related to domestic and international markets for protein meals and vegetable fats and oils.

The specialist oilseed crops grown in Australia are sunflower, soybeans, rapeseed, safflower and linseed. Sunflower and soybeans are summer grown while the others are winter crops. In Australia, oilseeds are crushed for their oil, which is used for both edible and industrial purposes and protein meals for livestock feeds.



Oilseed crops are grown in all States but the largest producing regions are the grain growing areas of the Eastern States.

#### *Sunflower*

When crushed, sunflower seed yields a high quality dual purpose oil used primarily to manufacture margarine, salad and cooking oils.

Queensland produces about two thirds of the Australian crop with the Darling Downs and Central Highlands being the major regions. New South Wales is the next largest producer with the north-west of the State dominating production. Smaller amounts are produced in all other states except Tasmania.

#### *Soybeans*

The major uses of soybean oil are in salad and cooking oils and margarine. Small amounts are used in the production of paints, detergents and plastics. Soybeans also yield a high protein feed for livestock with a small proportion used to manufacture adhesives and synthetic fibres and meats.

Queensland and New South Wales produce virtually all of Australia's soybean crop. The main producing areas are the irrigation districts of the Darling Downs and northern New South Wales. Lesser areas include the Burnett and Lockyer regions of Queensland while production of raingrown soybeans is expanding on the North Coast of New South Wales.

In irrigated areas, soybeans have increasingly been used as a rotational crop for cotton.

#### *Rapeseed*

The main use of rapeseed oil has been in salad and cooking oils and in margarine with a small amount being used for industrial purposes.

The major production areas are the tablelands and western slopes of New South Wales followed by the south-east of South Australia and the Western Districts of Victoria. Smaller levels of production occur in the South Coast region of Western Australia.

Following significant increases in the 1960s and 1970s, rapeseed production declined rapidly due to problems of blackleg disease and erucic acid content. Production has recovered in recent years with the development of varieties to overcome these problems and in response to the crop rotation benefits of rapeseed.

#### *Safflower*

The oil from safflower is used in the production of cooking oil, margarine, soaps, paints, varnishes, enamels and textiles. In recent years, New South Wales and Queensland together have produced around 90 per cent of Australian output. In Queensland, most production occurs in the Central Highlands with smaller amounts coming from the Dawson-Callide Valley and the Darling Downs. New South Wales production is centred on the Central West.

Wide fluctuations in safflower production since the mid 1960s have been due to variable seasonal conditions affecting yields and the profitability of other crops which has influenced plantings.

#### *Linseed*

The oil from crushed linseed is used in the manufacture of paints, varnishes, technical inks and linoleum.

The main producing areas are the wheat belt of New South Wales, the Darling Downs in Queensland, the Western Districts of Victoria and, to a lesser extent, the south-eastern districts of Victoria. Linseed production has been generally declining in recent years.

#### **Other Oilseeds**

Peanuts and cottonseed are summer crops grown primarily for human consumption and fibre purposes respectively. The rapid expansion of the cotton industry in recent years has resulted in cottonseed becoming the major oilseed in Australia. In 1984-85 cottonseed production reached some 373,000 tonnes. Cottonseed oil is used mainly in the manufacture of compound cooking fats and margarine. The least important source of vegetable oils in Australia is peanuts as it is only the low quality kernels which are crushed for oil. Crashings may vary between 3,000 and 7,000 tonnes per annum depending on the quality of the crop. Peanut oil is a high quality oil which is used in the manufacture of margarine and in compound cooking fats and is also used as a cooking and salad oil.

#### *Peanuts*

The major peanut growing areas are around Kingaroy in south-east Queensland and the Atherton Tablelands in North Queensland, with smaller pockets of production around Tweed Heads in New South Wales, the Ord River area of Western Australia and around Douglas in the Northern Territory.

About 80 per cent of peanuts grown in Australia are of Virginia variety, the remainder being of Spanish types.

Although area planted to peanuts has stabilised in recent years at around 25,000 to 33,000 hectares, production has fluctuated depending on seasonal conditions. Output in 1984-85 is estimated to total some 43,000 tonnes compared with 47,000 tonnes produced in 1983-84.

Local demand for peanuts and peanut products is comparatively static with a limited potential for growth corresponding to population growth. The local growing industry normally supplies most of the domestic demand for edible peanuts in its major outlets: peanut butter, packaged trade and confectionery. Any surplus is sold on export markets. Exports vary according to the size of the crop.

#### SELECTED OILSEED CROPS: AREA, PRODUCTION AND GROSS VALUE

Year	Sunflower	Soybeans	Rapeseed	Safflower	Linseed	Total
Area ('000 hectares)						
1979-80 . . . . .	221.1	56.5	41.6	53.6	17.2	390.0
1980-81 . . . . .	197.7	39.6	23.6	18.3	10.0	289.2
1981-82 . . . . .	177.5	40.5	15.7	33.4	6.6	273.7
1982-83 . . . . .	176.1	48.3	12.4	11.5	4.9	253.2
1983-84 . . . . .	233.5	48.1	17.8	54.9	5.3	320.4
1984-85p . . . . .	310.7	59.5	29.0	43.5	6.7	449.4
Production ('000 Tonnes)						
1979-80 . . . . .	141.7	82.0	41.1	30.0	14.4	309.2
1980-81 . . . . .	139.0	73.2	17.2	8.1	7.4	244.9
1981-82 . . . . .	115.1	77.1	14.5	19.6	6.0	232.3
1982-83 . . . . .	104.0	53.2	6.7	5.3	2.5	171.7
1983-84 . . . . .	170.4	88.6	17.2	30.6	4.3	311.1
1984-85p . . . . .	n.y.a.	n.y.a.	30.7	29.1	6.5	n.y.a.
Gross Value (\$ million)						
1979-80 . . . . .	36.3	21.6	9.1	6.0	3.1	76.1
1980-81 . . . . .	34.3	22.4	4.5	2.2	2.2	65.6
1981-82 . . . . .	28.3	19.8	3.3	5.2	1.6	58.2
1982-83 . . . . .	27.2	16.3	1.6	1.6	0.7	47.4
1983-84 . . . . .	58.9	26.9	5.0	7.8	1.3	99.9
1984-85p . . . . .	8.4	n.y.a.	8.1	6.6	1.7	n.y.a.

#### PEANUTS: AREA, PRODUCTION AND GROSS VALUE

Year	Area	Production	Gross value
	('000 hectares)	('000 tonnes)	(\$ million)
1979-80 . . . . .	31.7	38.9	22.3
1980-81 . . . . .	27.1	43.2	36.6
1981-82 . . . . .	33.4	57.6	37.0
1982-83 . . . . .	35.9	23.3	17.8
1983-84 . . . . .	32.2	47.2	40.2
1984-85p . . . . .	25.5	n.y.a.	37.6

### Cotton

Cotton is grown primarily for its fibre (lint). When the cotton is matured, seed cotton is taken to a gin where it is separated (ginned) into lint, seed and thrash. Lint is used for yarn while seed is further processed at an oil mill. There the short fibres (linters) remaining on the seed after ginning are removed. They are too short to make into cloth but are used for wadding, upholstery and paper. The seeds are then separated into kernels and hulls. Hulls are used for stock feed and as fertilizer while kernels are crushed to extract oil. The remaining cake is ground into meal which is protein roughage used as stock feed.

Over three-quarters of Australia's total production of cotton lint is grown in New South Wales, principally in the Namoi, Macquarie, Gwydir and McIntyre Valleys and the Bourke area. Irrigation water for these areas is provided from the Keepit, Burrendong, Copeton and Glenlyon dams and the Darling River. The rest is grown in Queensland, in the Emerald, Biloela, St George, and Darling Downs areas. Most of these areas are also irrigated. Australian production has for some time satisfied most of the requirements of local mills for short and medium staple cotton. Since the mid 1970s there has been very strong investment growth in the cotton industry and the resultant surge in plantings has resulted in large amounts of cotton becoming available for export.

Exports from the 1984-85 crop will account for 92 per cent of production, and are expected to be about 225,000 tonnes of raw cotton (or lint), valued at over \$300 million, with Japan, Taiwan and South Korea being the main markets.

A further expansion in Australian cotton plantings is expected in 1985-86. It is unlikely that local yarn spinners will increase production significantly in the medium term. Consequently any further growth in production is likely to be accompanied by a growth in cotton exports

#### COTTON: AREA, PRODUCTION AND EXPORTS

Year	Area	Seed cotton (a)			Raw cotton export		
		Quantity	Gross value	Cottonseed (b)	Lint(c)	Quantity	Value f.o.b.
	'000 ha	'000 tonnes	\$m	'000 tonnes	'000 tonnes	'000 tonnes	\$m
1979-80	75.0	243.7	135.3	135.8	83.2	48.5	66.9
1980-81	77.9	236.6	147.2	161.2	98.9	58.7	92.1
1981-82	92.3	324.9	182.0	219.0	134.0	79.2	117.2
1982-83	96.4	285.6	167.5	164.0	101.0	129.2	197.6
1983-84	137.4	400.5	268.8	230.0	141.0	81.5	147.9
1984-85p	151.3	n.y.a.	317.2	373.0	243.0	139.7	259.6

(a) Before ginning. (b) Estimated by the Bureau of Agricultural Economics. (c) Provided by the Raw Cotton Marketing Advisory Committee.

### Sugar

Sugar cane is grown commercially in Australia along the east coast over a distance of some 2,100 kilometres in a number of discontinuous areas from Maclean in northern New South Wales to Mossman in Queensland. The geographical spread contributes to the overall reliability of the sugar cane crop and to Australia's record as a reliable sugar supplier.

Approximately 95 per cent of production occurs in Queensland, with some 75 per cent of the crop grown north of the Tropic of Capricorn in areas where rainfall is reliable and the warm, moist and sunny conditions are ideal for the growing of sugar cane. The total area of land assigned to cane growing, among the 6,600 canegrowers in 1984-85 was 390,000 hectares. Farm sizes range between 20-70 hectares.

Australian cane farmers are regarded as amongst the most efficient in the world and employ a high degree of mechanisation in ploughing, planting, harvesting, and transportation activities. The Australian industry was the first in the world to introduce mechanical cultivation and harvesting techniques and by 1964 the entire industry had converted to bulk handling.

The cane crop is generally planted in April/May and harvested from June to December the following year. The major proportion of each year's crop is from ratoons while in New South Wales most crops are allowed to grow for two seasons due to the slower growing conditions.

The organisation of the Australian sugar industry is complex. The Queensland Government controls the quantity of raw sugar produced through a system of mill peaks which is translated into cane quotas for growers. In addition the Queensland Government contracts with CSR Limited and Millaquin Sugar Company Pty Limited for the refining, marketing and distribution of home consumption needs, arranges through CSR Limited the export marketing of raw sugar, and regulates the division of industry proceeds between growers and millers.

There are 33 raw sugar mills located throughout the growing regions: 30 are located in Queensland and the remaining 3 in New South Wales. Fifteen of the mills are co-operatively owned by canegrowers and the remaining eighteen by proprietary companies. Refineries are located in each mainland capital city and at Bundaberg. The six bulk sugar export terminals located in Queensland are at present capable of storing 2.9 million tonnes. While raw sugar is the main product from mills, important by-products are bagasse (fibre), molasses, ash and filter mud.

In recent years sugar cane production has been around 24 million tonnes yielding between 2.8 and 3.3 million tonnes of sugar. In 1985 approximately 24 million tonnes of cane are expected to be crushed to produce 3.4 million tonnes of sugar.

Area, production and yield levels for sugar cane from 1979-80 to 1984-85 are provided in the following table.

SUGAR CANE: AREA, PRODUCTION AND YIELD

Year	New South Wales					Queensland				
	Sugar cane cut for crushing			Raw sugar(a)		Sugar cane cut for crushing			Raw sugar(a)	
	Area harvested	Production	Yield	Quantity	Yield	Area harvested	Production	Yield	Quantity	Yield
	'000 ha	'000 tonnes	t/ha	'000 tonnes	t/ha	'000 ha	'000 tonnes	t/ha	'000 tonnes	t/ha
1979-80 . . . . .	11.8	1,291.5	109.1	155.8	13.2	255.4	19,859.6	77.8	2,807.2	11.0
1980-81 . . . . .	14.0	1,435.3	102.4	181.2	12.9	274.3	22,540.4	82.2	3,148.5	11.5
1981-82 . . . . .	14.3	1,505.9	105.4	184.7	13.4	301.7	23,587.9	78.2	3,250.4	10.8
1982-83 . . . . .	16.0	1,702.3	106.5	175.9	11.0	302.5	23,114.8	76.4	3,324.2	11.0
1983-84 . . . . .	15.2	1,468.4	96.7	159.0	10.5	292.0	22,723.0	77.8	3,011.6	10.3
1984-85p . . . . .	18.2	1,538.1	84.3	198.9	10.9	297.8	23,910.0	80.3	3,349.2	11.5

(a) In terms of 94 net titre.

The domestic market is reserved entirely for sugar produced in Australia. This is achieved by an embargo on the import of sugar. The maximum price of refined sugar for sale to wholesalers and manufacturers is fixed each six months under a formula contained in the Commonwealth/Queensland Sugar Agreement.

Domestic sales account for about 760,000 tonnes annually or approximately twenty per cent of the total industry sales. Granulated sugars account for about 75 per cent of the total domestic sales with liquid sugars (15 per cent), castor sugar (5 per cent), and raw sugar taking up the bulk of the remainder. About two-thirds of the sales of refined sugar products go to processed food and drink manufacturers.

The Australian sugar industry exports about 75 per cent of its annual raw sugar production and is one of the world's largest sugar exporters. In 1984 exports totalled 2.59 million tonnes compared with exports from Cuba of 7.02 million tonnes, Brazil 3.04 and the EEC 4.39 million tonnes.

In 1984-85 the domestic market and long-term contracts with Korea, Malaysia, Singapore, New Zealand and China provided secure outlets for approximately 50 per cent of the industry's capacity, the balance of export sugar being sold on the free market. Prices on the free market during 1984-85 were very low.

The disposal pattern of Australia's sugar production is shown in the following table.

SUGAR: AREA, PRODUCTION, EXPORTS AND CONSUMPTION

Year	Production			Exports			Apparent consumption in Australia(a)	
	Area harvested	Sugar cane		Raw sugar	Raw and refined sugar		Total	Per head
		Quantity	Gross value	Quantity	Quantity	Value f.o.b.		
	'000 ha	mil. tonnes	\$m	mil. tonnes	mil. tonnes	\$m	'000 tonnes	kg
1979-80 . . . . .	267.2	21.5	548.2	3.0	2.2	666.9	692.5	47.4
1980-81 . . . . .	288.3	24.0	799.7	3.3	2.6	1,146.2	721.4	48.7
1981-82 . . . . .	315.9	25.1	590.2	3.4	2.5	777.7	710.8	47.2
1982-83 . . . . .	318.5	24.8	508.9	3.5	2.5	557.7	697.9	45.1
1983-84 . . . . .	307.1	24.2	516.6	3.2	2.4	621.3	681.1	44.1
1984-85p . . . . .	316.0	25.4	500.4	3.5	2.5	574.1	n.y.a.	n.y.a.

(a) Total quantity of sugar available for consumption in Australia comprises refined sugar and refined sugar contained in manufactured foods.

Australia has regularly participated in arrangements to regulate the international sugar market and was a signatory to the 1984 International Sugar Agreement (ISA). The new Agreement is an administrative pact only, and unlike previous Agreements contains no economic provisions. This means that member countries are not constrained in their sugar exports.

## Vegetables

### Vegetables for human consumption

The area sown to vegetables reached a peak of over 200,000 hectares in 1945, but has remained static at around 109,000 hectares since 1975-76. However, yields from most vegetable crops have increased due to variety breeding for increased yields, greater use of irrigation and better control of disease and insect pests.

Because of the wide climatic range in Australia, supplies for main city markets are drawn from widely different areas, depending on the times of maturity of the various crops. Historically, market gardens were located near urban centres and, while many small scale growers still produce crops close to city markets, urban expansion, rising urban land values, improvements in transport and irrigation and developments in freezing, canning and drying have extended the industry far from the cities. Transport costs are reduced by the location of processing establishments in producing areas, although city markets still absorb the bulk of fresh and processed produce.

*Potatoes.* Potatoes require deep friable soils which, in Australia, are usually basaltic, alluvial or swampy in origin. Fertiliser requirements, which are generally high, vary with the type of soil. While potatoes require only moderate temperatures for growth, the greatest proportion of Australia's potatoes are grown as a summer crop because potato plants are killed by heavy frosts. In recent years an increasing proportion of potatoes has been grown under irrigation and potato growing has become increasingly mechanised, with individual growers having larger areas and becoming more specialised.

Over the last two decades increases in per capita consumption have followed population increases. Consumption of processed potato products is forecast to continue to increase slightly. The main processed potato products are frozen chips, crisps, dehydrated granule and flake. Other, but less important, processed potato products are soup, baby foods, salads and canned potatoes.

*Potato marketing.* Sixty-five per cent of total production is sold through fresh market outlets with the remaining 35 per cent going to processing. The principal forms of potato processing are canning, drying and freezing. The majority of processing potatoes are purchased by the two frozen french fry potato processors who operate in Tasmania and Victoria. Processors negotiate contracts directly with growers. South Australia and Western Australia have marketing authorities which monitor production, pricing and the sale of potatoes. Other States rely on potato merchants and agents for marketing.

*Potato trading.* Exports of fresh potatoes, and potato flour, meal and flakes have shown an overall increase in the last decade, with the exception of 1983-84, when due to seasonal conditions there was a marked decrease in exports of fresh potatoes. Imports of processed potatoes are generally insignificant.

*Tomatoes.* Tomatoes are grown generally for the fresh market. The major producing States are Queensland and Victoria. Processing is undertaken mainly in Victoria, New South Wales and South Australia.

*Peas.* Growing peas is an important activity for farmers in northern Tasmania, and in the Lockyer and Fassifern Valleys of Queensland. Nationally, about 10 per cent of the total area used for vegetable growing is devoted to pea production. Peas for processing accounted for more than 90 per cent of the total area sown to peas for the year ending 31 March 1984.

*Beans.* Beans are mainly grown for the processing market. Major producing States are Queensland and Tasmania.

*Onions.* Onions are grown throughout Australia with the major producing States being South Australia and Queensland. Processing is relatively insignificant.

*Other Vegetables.* The other major vegetables produced are carrots, cauliflowers and cabbages (mainly for the fresh market).

### APPARENT CONSUMPTION OF VEGETABLES

(Kilograms per capita per year)

Year	Potatoes	Other root and bulb vegetables	Tomatoes	Leafy and green vegetables	Other vegetables	Total, fresh equivalent weight
1978-79 . . . . .	51.5	17.2	13.5	27.5	19.5	129.2
1979-80 . . . . .	54.9	17.3	14.5	25.1	17.6	129.5
1980-81 . . . . .	54.9	17.5	15.7	22.3	17.5	127.8
1981-82 . . . . .	57.6	18.7	16.7	20.8	17.1	130.8
1982-83 . . . . .	52.2	16.9	16.5	21.4	18.0	125.0
1983-84 . . . . .	62.6	17.4	18.6	21.8	18.3	138.8

VEGETABLES FOR HUMAN CONSUMPTION: AREA AND PRODUCTION

Year	French and runner beans	Cabbages	Carrots	Cauli-flowers	Onions	Green peas	Potatoes	Tomatoes	Total vegetables
	AREA ('000 hectares)								
1979-80 . . . .	7.1	2.5	3.6	3.3	4.0	14.5	36.7	8.5	106.5
1980-81 . . . .	(a)6.3	2.4	3.7	(a)2.8	4.0	(a)10.8	35.7	9.1	103.0
1981-82 . . . .	7.1	(a)2.4	3.9	3.1	4.0	12.1	(a)36.1	9.1	106.7
1982-83 . . . .	6.7	2.5	3.8	3.3	4.2	14.8	(a)37.4	8.7	110.3
1983-84 . . . .	6.7	2.5	4.3	3.4	3.8	12.2	37.9	9.1	109.9
1984-85p . . . .	n.y.a.	n.y.a.	n.y.a.	n.y.a.	4.5	n.y.a.	37.7	8.5	108.2

Year	French and runner beans	Cabbages	Carrots	Cauli-flowers	Onions	Green peas	Potatoes	Tomatoes	
	Process-ing (shelled weight)		Sold in pod (pod weight)		PRODUCTION ('000 tonnes)				
1979-80 . . . .	34.3	74.7	101.6	94.6	119.9	43.0	2.1	857.4	196.9
1980-81 . . . .	(a)34.0	76.1	112.6	(a)79.2	114.8	(a)32.6	(a)1.5	865.8	216.8
1981-82 . . . .	34.6	(a)71.0	112.5	85.4	127.4	38.4	1.7	(a)918.6	228.4
1982-83 . . . .	33.5	67.2	105.0	76.5	129.0	46.0	1.9	858.5	224.1
1983-84 . . . .	32.3	72.3	124.3	84.4	115.9	44.0	2.1	1,019.8	258.3
1984-85p . . . .	n.y.a.	n.y.a.	n.y.a.	n.y.a.	148.1	n.y.a.	n.y.a.	n.y.a.	249.2

(a) Incomplete, information on this commodity was not separately collected in some States.

Value of production and value of exports

Gross value of production for 1984-85 (preliminary) amounted to \$624.8 million. Export value of fresh, frozen, or otherwise prepared vegetables amounted to \$55 million for the same period.

PROCESSED VEGETABLES: AUSTRALIAN PRODUCTION

('000 tonnes—unless otherwise stated)

Derived from the recorded monthly production of the Manufacturing Census

Item	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85p
Quick frozen vegetables—						
Beans . . . . .	16.1	19.2	22.5	16.7	21.2	} 205.3
Peas . . . . .	38.9	35.5	47.3	42.4	41.7	
Potatoes . . . . .	65.8	77.9	94.3	94.8	107.8	
Other . . . . .	28.3	25.2	34.3	25.5	25.2	
Vegetables preserved, canned or bottled (excluding pickles, etc.)						
(a)—						
Beans—Green . . . . .	3.7	3.4	5.7	4.1	4.1	n.a.
Baked (including pork and beans) . . . . .	26.1	21.3	25.0	27.4	n.a.	n.a.
Beetroot . . . . .	25.9	23.3	26.1	n.a.	n.a.	n.a.
Carrots . . . . .	6.1	4.4	3.7	4.4	2.5	n.a.
Cucumber (including pickled) . . . . .	1.0	1.6	0.9	n.a.	1.2	n.a.
Gherkins—pickled . . . . .	1.9	2.3	2.2	2.0	2.1	1.7
Olives—pickled . . . . .	0.3	0.5	0.5	0.5	0.6	0.6
Onions (including pickled) . . . . .	4.1	4.9	3.4	3.5	2.7	2.6
Peas—Green . . . . .	9.7	9.4	11.2	13.7	11.9	n.a.
Tomatoes (excluding canned pulp) . . . . .	13.1	15.3	15.4	9.9	17.8	n.a.
Tomato juice (million litres) . . . . .	9.3	7.0	8.3	4.5	n.a.	n.a.

(a) Canned in tinplate or aluminium cans; bottled in glass bottles.

For further information on vegetables see the following publications: *Crops and Pastures, Australia* (7321.0), *Production Bulletin No. 3: Food, Drink and Tobacco, Australia* (8359.0), *Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0) and *Value of Agricultural Commodities Produced, Australia* (7503.0).

### Fruit (excluding grapes)

A wide variety of fruit is grown in Australia ranging from pineapples, mangoes and papaws in the tropics to pome, stone and berry fruits in the temperate regions.

Citrus fruits (predominantly oranges) are grown in all States except Tasmania and account for almost half of the production of all orchard fruits. New South Wales and South Australia produce the greatest quantity of citrus, followed by Victoria and Queensland while that of Western Australia is very small. Pome fruits (apples and pears) account for about 40 per cent of orchard fruit grown in Australia. Victoria, New South Wales and Tasmania are the most important apple-growing States with significant quantities also being grown in the other States. About 80 per cent of all Australian pears are produced in Victoria. Stone fruits (peaches, apricots, plums and prunes, cherries and nectarines) account for around one-eighth of orchard fruit production. Heaviest production is in Victoria, South Australia and New South Wales, with smaller quantities in the other States. Pineapples (about 80 per cent canned) and bananas (virtually all sold fresh) are the most important tropical fruits. Queensland produces almost all the pineapples and about 46 per cent of the bananas grown in Australia. Banana production on the sub-tropical north coast of New South Wales is equivalent to that of Queensland with the remaining 8 per cent of production grown in Western Australia.

In recent years there has been rapid expansion in the cultivation of many relatively new fruit crops in Australia. The combined gross value of output of these new fruits is presently worth about \$40m a year and there is considerable scope for continued growth in the future.

Avocado is perhaps the most commonly known of these crops and production has expanded considerably during the past decade to a current gross value of over \$6m. Avocado production is mainly in Queensland and New South Wales with minor quantities produced in Western Australia, South Australia and Victoria.

Kiwifruit is a relatively new temperate fruit crop to Australia. Production has been expanding rapidly mainly in Victoria and New South Wales and further expansion is expected. Of the berry fruits, strawberries are widely grown, with largest production in Victoria and Queensland. Interest in the production of blueberries in Australia has developed only recently and plantings of blueberries have increased rapidly mainly in Victoria and New South Wales. Other berries (currants and raspberries) are grown predominantly in Tasmania and production has been reasonably constant over the past five years.

Tropical fruit such as mangoes, papaws, passionfruit, custard apples and guavas, are grown mainly in Queensland. Smaller quantities of tropical fruit are produced in the north coast region of New South Wales, Western Australia and more recently the Northern Territory. The largest expansion has been of mango production which has more than doubled since 1979. Given the large number of non-bearing mango trees production is expected to continue to increase dramatically. There is also considerable interest in many other exotic tropical and subtropical fruits. Production of lychees and persimmons has recently commenced and some plantings of rambutan, sapote and longans have been made, mainly in Queensland and the north coast region of New South Wales.

Almond is still the major nut crop in Australia with almost the entire almond crop produced in South Australia and Victoria. Pecan nut production increased substantially in the 1970s, mainly in northern New South Wales. More recently plantings of pistachio trees have commenced in South Australia, Victoria, New South Wales and Western Australia. The major expansion in the nut crops has been with macadamias, a native Australian tree. The main growing regions are the coastal region of northern New South Wales and southern Queensland. During the past decade production of macadamia nuts has increased rapidly to a current gross value of about \$3m.

#### SELECTED FRUIT STATISTICS

Year	Orchard fruit: number of trees('000)				Tropical and other fruits: area (ha)			Total area of fruit (ha)
	Apples	Oranges	Pears	Peaches	Bananas	Pineapples	Other fruit	
1979-80 . . .	6,113	5,532	1,601	1,570	8,136	6,784	1,744	98,451
1980-81 . . .	6,099	5,872	1,622	1,649	8,558	6,583	1,831	100,516
1981-82 . . .	6,065	6,055	1,703	1,669	8,740	6,373	1,738	102,068
1982-83 . . .	6,098	6,219	1,556	1,642	9,040	6,010	1,774	104,325
1983-84 . . .	6,066	6,397	1,584	1,646	9,282	6,011	2,085	107,534
1984-85p. . .	6,012	6,575	1,500	1,690	9,449	6,856	1,864	90,301

SELECTED FRUIT STATISTICS—continued

Year	Apples	Apricots	Bananas	Cherries	Oranges	Peaches	Pears	Pine-apples	Plums and Prunes
PRODUCTION ('000 tonnes)									
1979-80	298.8	26.4	125.1	(a) 3.9	392.1	71.5	124.3	123.3	(a) 15.0
1980-81	306.9	30.6	124.3	6.5	424.5	79.2	145.6	123.3	20.8
1981-82	294.5	27.1	129.6	5.4	376.3	64.6	(a) 109.7	125.5	16.4
1982-83	300.8	26.9	140.5	4.2	410.0	63.0	119.2	111.3	20.6
1983-84	207.0	23.6	146.4	3.5	391.8	48.3	122.1	115.1	20.0
1984-85p	n.y.a.	24.3	151.4	3.8	439.0	58.8	n.y.a.	135.3	20.7
GROSS VALUE OF PRODUCTION (\$ million)									
1979-80	107.7	13.9	45.9	5.8	77.9	24.0	36.5	20.2	10.6
1980-81	118.9	16.9	59.5	10.0	86.0	25.7	41.4	19.8	15.2
1981-82	124.2	18.1	61.4	13.2	89.6	23.0	(a) 30.8	20.5	11.2
1982-83	132.4	18.3	70.1	7.9	101.0	21.3	41.9	25.4	16.9
1983-84	134.1	17.6	86.8	8.7	105.3	25.4	45.9	26.2	17.5
1984-85p	159.5	n.y.a.	93.7	n.y.a.	n.y.a.	24.4	42.2	30.6	n.y.a.

(a) Incomplete; information on this commodity was not separately collected in some States.

Processed fruit and fruit products

After rapid expansion in the 1960s, output of canned fruit declined and then levelled off due to the effects of contracting overseas markets for Australian canned fruit. Production of natural fruit juices has increased markedly in the last decade and this has reflected improvements in marketing methods, effective promotion and public awareness of the nutritional value of natural juices.

FRUIT PRODUCTS

Derived from the Annual Manufacturing Census and the recorded monthly production

	Unit	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85p
Fruit juice based cordials and syrups(a)	ML	76.3	77.8	80.4	78.7	75.7	85.2
Natural fruit juice(b)—							
Single strength	ML	208.4	232.6	186.5	201.1		
Concentrated(c)	ML	24.6	32.6	27.3	32.6	n.y.a.	n.y.a.
Cider and perry	ML	17.1	15.0	19.0	18.4		
Canned or bottled fruit (excl. canned pulp)	'000 tonnes	257.5	226.4	146.7	157.6	153.0	186.2
Jams	'000 tonnes	21.8	29.1	32.6	29.3	30.3	29.8

(a) Containing at least 25 per cent by volume of pure fruit juices. (b) Excludes fruit drinks consisting of diluted fruit juices with or without artificial flavourings. (c) Excludes grape must, and comprises actual quantity of concentrated juices.

APPARENT CONSUMPTION OF FRUIT AND FRUIT PRODUCTS

(kg per capita per year)

Year	Fresh			Jams, conserves, etc.	Dried tree fruit	Processed fruit	Total, fresh equivalent weight
	Oranges	Other citrus	Other fresh fruit				
1978-79	28.1	7.3	34.4	2.3	0.4	10.5	93.3
1979-80	33.8	6.4	39.3	1.5	0.6	12.4	106.8
1980-81	31.6	7.6	35.8	1.5	0.4	11.7	99.9
1981-82	29.5	6.9	37.8	1.7	0.6	10.9	99.7
1982-83	41.4	6.4	39.4	1.7	0.6	9.4	110.6
1983-84	43.5	7.7	38.2	1.8	0.7	9.8	113.1

Fruit exports

The value of exports of fruit and fruit products (excluding grapes) has in most recent years accounted for more than a quarter of the value of the production of fresh fruit. Fresh or chilled fruit (mostly apples, pears and citrus) account for some 40 per cent of this; preserved fruit (mostly canned pears and peaches) make up most of the remainder; only small quantities of dried fruits (other than grapes) are exported. The total value of those exports has been relatively constant in recent years.

Fresh apple exports to Europe have been markedly reduced in recent years mainly because of rising shipping costs and improved storage techniques in Europe. On the other hand, markets in other areas such as South-East Asia and the Middle East have been maintained in most years. Fresh pear exports to Europe have also declined but not to the same extent as apples. Other export markets for pears, such as in South-East Asia, have



gained importance in recent years. Exports of citrus, predominantly oranges, have been relatively steady in recent years quantity wise, while values have steadily increased. Citrus exports are sensitive to competition from the U.S.A. Exports of oranges were made to Japan for the first time in 1983-84 and more than doubled in 1984-85. The Australian industry sees this as an important first step in establishing a potentially important trade with Japan. Effects of the E.E.C. import regime have shown in a decrease in processed fruit exports to Europe, although the U.K. remains Australia's main market.

## FRUIT EXPORTS; VALUE F.O.B.

(\$ million)

Year	Fresh and chilled			Canned or bottled			Peaches and pears	Pine-apples	Fruit salad
	Apples	Pears	Oranges	Apricots	Peaches	Pears			
1979-80 . . . . .	20.1	18.3	9.9	1.5	19.3	20.0	3.6	3.1	7.6
1980-81 . . . . .	15.3	20.0	8.0	1.3	16.0	20.6	3.0	3.5	9.6
1981-82 . . . . .	19.0	13.7	8.9	1.0	15.4	13.7	2.1	3.6	7.5
1982-83 . . . . .	15.7	17.8	12.6	1.1	13.8	16.5	2.4	2.2	9.8
1983-84 . . . . .	13.7	15.9	9.4	1.2	13.4	10.9	1.8	2.5	10.7
1984-85p . . . . .	12.0	21.3	14.4	0.4	12.1	17.9	1.4	3.9	10.2

## FRUIT: VALUE OF PRODUCTION AND EXPORTS

(\$ million)

Year	Gross value			Exports(a) value f.o.b.
	Orchard fruit	Tropical, berry and other	Total	
1979-80 . . . . .	325	82	407	131
1980-81 . . . . .	366	94	460	131
1981-82 . . . . .	365	99	464	122
1982-83 . . . . .	385	113	498	135
1983-84 . . . . .	419	136	554	117
1984-85p . . . . .	n.y.a.	n.y.a.	627	141

(a) Fruit and nuts, excluding grapes (fresh and dried); includes fresh, dried and preserved and fruit preparations.

**Fruit imports**

Small but increasing quantities of fresh fruit, mainly off-season citrus from the U.S.A., are imported, while most imports of dried fruit consist of dates from China, Iraq, Iran, Pakistan and the U.S.A. Dried apricots became a significant import in 1984. Imports of orange juice have increase to around 100 million litres in recent years to meet the shortfall in Australian production.

**Marketing and regulation of the fruit industry**

*Apples and pears.* The Australian Apple and Pear Corporation has the function of promoting and controlling the export of Australian apples and pears as well as the promotion of trade and commerce in apples and pears within Australia. It also has power to promote, or engage in, research relating to the production, packaging, handling, transportation or marketing of apples and pears and to promote new apple and pear products.

The current underwriting schemes for export apples and pears terminate at the end of the 1985 export season. Under the schemes the Government guarantees a minimum return of 95 per cent of the weighted average returns for all apple and pear exports over the preceding four seasons. The Industries Assistance Commission is to report in September 1985 on what Government assistance measures may be appropriate for the apple and pear industry after the 1985 season.

*Canned Fruit.* On 29 November 1979 the Commonwealth enacted legislation restructuring the industry's marketing arrangements. Similar complementary legislation has been enacted by the four States of New South Wales, Victoria, South Australia and Queensland.

Under the legislation the Australian Canned Fruits Corporation (replacing the Australian Canned Fruits Board) is empowered to acquire and sell the production of canned apricots, peaches and pears and is responsible for determining prices, terms and conditions for sales in both Australian and export markets. Sales are made through markets nominated by canners

and approved by the Corporation. Markets are classified as Pool and Non-Pool with returns from Pool markets equalised by the Corporation. Entitlements for sales in Pool markets are allocated to canners prior to the start of each season.

The Corporation's administrative expenses are financed by a levy imposed on the production of canned fruits under the *Canned Fruits Levy Act 1979*.

The Corporation is advised in the performance of its functions by the Australian Canned Fruits Industry Advisory Committee.

In October 1984, the operation of the Australian Canned Fruits Corporation (ACFC) was extended for a further three years to the end of 1987. A more commercially orientated and flexible corporation is envisaged with the expansion of the Corporation's board to make it more effective in its commercial operations, more accountable to industry and government and more capable of achieving its objective of improving returns to growers.

For further data on fruits and fruit products see the publications *Fruit, Australia (7322.0)*, *Production Bulletin No. 3: Food, Drink and Tobacco, Australia (8359.0)*, *Apparent Consumption of Foodstuffs and Nutrients, Australia (4306.0)* and *Value of Agricultural Commodities Produced, Australia (7503.0)*.

## Grapes

Grapes are a temperate crop which require warm to hot summer conditions for ripening and predominantly winter rainfall. Freedom from late spring frosts is essential. They are grown for wine-making, drying and, to a minor extent, for table use. Some of the better known wine producing areas are Barossa, Clare, Riverland, Southern Districts and Coonawarra (S.A.); North Eastern Victoria and Great Western (Vic.); Hunter and Riverina (N.S.W.); Sunraysia (N.S.W. and Victoria); Swan Valley and Margaret River (W.A.).

Nearly all the dried fruit is produced along the River Murray and its tributaries in Victoria and N.S.W. with small localised areas in other States.

### VITICULTURAL STATISTICS: AREA, PRODUCTION AND VALUE

Year	Area		Production: grapes used for—			
	Bearing	Total	Winemaking	Drying	Total (a)	
	'000 ha	'000 ha	'000 tonnes fresh weight	'000 tonnes fresh weight	'000 tonnes fresh weight	Gross value \$m
1979-80 . . . . .	65.2	69.7	502.5	339.2	865.3	231.1
1980-81 . . . . .	64.7	69.5	473.1	248.1	743.4	178.2
1981-82 . . . . .	63.7	68.4	499.9	361.7	884.9	222.8
1982-83 . . . . .	61.9	66.5	431.3	310.3	768.1	212.5
1983-84 . . . . .	61.7	66.0	495.1	320.0	840.9	217.0
1984-85p . . . . .	58.8	63.0	494.8	319.7	836.6	199.2

(a) Includes grapes used for table and other purposes.

The bearing area of vines fell by about 10 per cent between 1979-80 and 1984-85. Area of vines not yet bearing has also decreased slightly from 1979-80 to 1984-85. Production of wine grapes has remained at around 500,000 tonnes in recent vintages, except for a reduced 1983 vintage of 431,000 tonnes due to adverse climatic conditions. Production of wine grapes has increased by more than 51 per cent since 1972-73.

The multipurpose grape production base has not shown much change over this period apart from annual variations due to seasonal conditions. Multipurpose grapes are used predominantly for winemaking and drying, the latter process being particularly susceptible to adverse seasonal conditions. There was a diversion of multipurpose grapes to winemaking during most of the 1970s and this resulted in a decline in the volume of grapes dried. In the early 1980s there was some reversal in this trend, and production of dried vine fruit in 1980 and 1982 to 1984 seasons, inclusive, was higher than levels prevailing in the 1970s. However production in 1985 was estimated to be only slightly above the average of the late 1970s, mainly reflecting winery demand. While a serious oversupply of dried vine fruit existed on world markets in 1983 and 1984, the situation improved rapidly in early 1985 as a consequence of a strong US dollar and reduced production from Northern Hemisphere suppliers in late 1984. While the US still holds considerable stocks of fruit, prices have improved considerably on the depressed levels of 1984. Australian exporters have continued to make

significant sales on international markets (assisted by the high quality of the Australian product). The Australian Dried Fruits Corporation is the body responsible for the organisation of the export trade in dried vine fruits. The Corporation also administers the statutory Dried Vine Fruits Equalisation Scheme and the Dried Sultana Production Underwriting Scheme. Both these schemes were restructured by the Government in 1985 following an inquiry into the dried vine fruits industry by the Industries Assistance Commission. The Government's objective was to make the industry more responsive to market signals. Until 1983 imports of dried vine fruit had been largely insignificant. However, imports totalled 2,473 tonnes in 1983-84 and 2,697 tonnes in 1984-85, the major sources being Greece and the USA. The Australian industry has demonstrated injury from subsidised imports from Greece and countervailing measures have been implemented. Also preliminary anti-dumping measures have been applied to imports from the USA, pending completion of inquiries as to whether dumping has occurred.

#### Varietal Statistics: 1984 Season

Varietal information relating to vines, grape production by end use and yield per hectare, is obtained in a special collection conducted at 30 June in New South Wales, Victoria, South Australia and Western Australia of all growers who reported vines in the Agricultural Census. No varietal information is collected in the other States and Territories. There is continuing research into correct identification of varieties to find out which are most suitable for different wine styles and different regions and several varieties have recently been re-named. The data are aggregated from the States of New South Wales, Victoria, South Australia and Western Australia only.

VITICULTURE: AREA AND PRODUCTION BY VARIETY, 1984 SEASON

	Area of Vines at harvest			Grubbings (actual and/or intended)	Production			Total
	Bearing	Not yet bearing	Total		Grapes used for—			
					Wine making	Drying	Other (a)	
	—hectares—		hectares	—tonnes (freshweight)—				
<b>Red grapes—</b>								
Cabernet Sauvignon . . . . .	3,401	363	3,764	133	23,672	—	4	23,676
Currant (incl. Carina) . . . . .	1,578	151	1,728	47	233	15,927	40	16,199
Grenache . . . . .	3,532	18	3,550	158	35,233	—	301	35,534
Mataro . . . . .	1,040	7	1,047	53	11,166	—	222	11,388
Pinot Noir . . . . .	319	155	473	8	2,049	—	4	2,053
Shiraz . . . . .	6,309	77	6,387	265	56,260	23	199	56,482
Other red grapes . . . . .	1,793	398	2,192	69	9,469	126	4,547	14,143
<b>Total red grapes . . . . .</b>	<b>17,972</b>	<b>1,169</b>	<b>19,141</b>	<b>733</b>	<b>138,082</b>	<b>16,076</b>	<b>5,317</b>	<b>159,475</b>
<b>White grapes—</b>								
Chardonnay . . . . .	1,202	720	1,920	4	8,515	—	12	8,526
Doradillo . . . . .	1,473	10	1,484	84	27,467	15	76	27,557
Muscat Blanc . . . . .	546	77	624	13	5,801	—	82	5,885
Muscat Gordo Blanco . . . . .	4,084	168	4,252	85	71,224	1,478	662	73,365
Palomino and Pedro Ximenes . . . . .	2,106	40	2,146	82	27,004	—	52	27,056
Rhine Riesling . . . . .	4,344	351	4,694	94	36,201	—	52	36,253
Semillon . . . . .	2,650	159	2,810	55	31,905	—	20	31,925
Sultana . . . . .	17,118	795	17,912	299	74,641	298,914	9,038	382,595
Waltham Cross . . . . .	1,269	31	1,299	68	7,470	3,106	3,801	14,377
Other white grapes . . . . .	6,055	639	6,696	215	66,476	83	3,035	69,593
<b>Total white grapes . . . . .</b>	<b>40,847</b>	<b>2,990</b>	<b>43,837</b>	<b>999</b>	<b>356,704</b>	<b>303,597</b>	<b>16,830</b>	<b>677,132</b>
<b>Total grapes . . . . .</b>	<b>58,819</b>	<b>4,159</b>	<b>62,978</b>	<b>1,731</b>	<b>494,786</b>	<b>319,673</b>	<b>22,147</b>	<b>836,607</b>

(a) 'Other' includes table use.

**DRIED VINE FRUIT: PRODUCTION, EXPORTS AND CONSUMPTION**

(Dried weight)

Year	Production				Exports			Consumption of dried vine fruit	
	Raisins	Sultanas	Currants	Total	Raisins/ sultanas	Currants	Total		
							Quantity	Value f.o.b.	
'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	\$m	kg
1979-80	5.3	71.8	5.8	82.8	39.2	2.3	41.5	55.1	1.9
1980-81	5.7	50.7	4.8	61.1	50.1	1.9	52.0	75.5	1.8
1981-82	5.8	78.5	5.9	90.2	38.5	0.8	39.4	49.5	1.7
1982-83	3.9	64.9	4.7	73.4	57.1	2.4	59.5	59.7	1.9
1983-84	1.4	69.0	4.6	75.0	51.6	0.9	52.5	54.1	1.7
1984-85p	n.y.a.	n.y.a.	n.y.a.	n.y.a.	61.5	1.0	62.4	58.7	n.y.a.

**Wine industry**

Australia produces a wide range of wine and brandy products. Over the past five years there has been a distinct trend towards greater production and consumption of unfortified or table wines. In the twelve months ending June 1985 sales of table wine accounted for more than 76 per cent of all sales of Australian wine. The large growth in table wine sales over the past five years has been principally due to the successful marketing of wine in 'casks' (usually fibreboard, box-shaped, 4-5 litre containers equipped with dispensing faucets). Exports and imports of wine, representing only some 2.7 per cent and 3.8 per cent respectively of the total domestic market for wine, are both relatively insignificant. The Australian Wine and Brandy Corporation is the body responsible for the control of the export trade in wine, brandy and grape spirit products. The Corporation has the power to regulate exports as well as promotion and publicity functions in export markets and in Australia. The Corporation has the power to trade with the approval of the Minister for Primary Industry but, to date, this power has not been invoked. The Corporation's future role is currently under review.

**PRODUCTION, CONSUMPTION AND EXPORT OF WINES**

Year	Production	Exports		Consumption in Australia per capita
		Quantity	Value f.o.b.	
		mil. litres	\$m	
1979-80	414.2	6.1	8.4	17.2
1980-81	374.3	7.5	11.9	18.2
1981-82	402.7	8.4	14.0	19.1
1982-83	340.1	8.0	13.4	19.7
1983-84	396.2	9.0	16.8	20.4
1984-85p	n.y.a.	8.7	16.9	21.3

For further details on viticulture, dried vine fruit, wine, etc. see the following publications: *Fruit, Australia* (7322.0), *Sales and Stocks of Australian Wine and Brandy* (8504.0) and *Viticulture, Australia* (7310.0).

**Miscellaneous crops**

The principal crops not covered above include fodder crops, tobacco, hops and mushrooms which, in 1983-84 had gross values as follows:

Crops	Gross value	Per cent of total crop gross value
	\$m	%
Fodder crops (hay)	99.5	1.2
Lupins	64.1	0.8
Tobacco	70.9	0.8
Hops	13.5	0.2
Mushrooms	29.4	0.3
Other (incl. nurseries)	223.7	2.7

**Fodder crops**

As well as crops specifically for grain, considerable areas of Australia are devoted to fodder crops. These crops are utilised either for grazing (as green feed), or conserved as hay, ensilage, etc.

This development of fodder conservation as a means of supplementing pasture and natural sources of stockfeed is the result of the seasonal and comparatively unreliable nature of rainfall in Australian agricultural areas.

**FODDER CROPS: AREA AND PRODUCTION**

Year	Hay(a)			Green feed or silage(b)	
	Area	Production		Area	Silage made
		Quantity	Gross value		
	'000 ha	'000 tonnes	\$m	'000 ha	'000 tonnes
1979-80 . . . . .	265	819	39.1	947	270
1980-81 . . . . .	320	826	58.3	1,096	338
1981-82 . . . . .	380	1,033	77.1	936	413
1982-83 . . . . .	408	879	100.6	1,292	301
1983-84 . . . . .	377	1,248	99.5	896	698
1984-85p . . . . .	261	848	70.9	864	n.y.a.

(a) Principally oaten and wheaten hay.

(b) Principally from oats, barley, wheat and forage sorghum.

**Lupins**

Lupins are grown primarily as a grain crop, but grazing of standing crops and stubble is also an important use. Because of their high protein content lupins are becoming increasingly important in livestock feed and for human consumption, particularly in some of the Asian countries.

There has been a significant expansion of lupin production in recent years, particularly in Western Australia which is the major producer and exporter of lupins. Smaller quantities are also grown in New South Wales, Victoria and South Australia mainly for domestic use.

The value of lupin exports in 1984-85 was estimated at about \$41 million, main markets being Europe and Taiwan.

**FARMSTOCKS OF CEREAL GRAINS, HAY AND SILAGE**

('000 tonnes)

At 31 March	Cereal grains				
	Barley	Oats	Wheat	Hay	Silage
1979 . . . . .	637	1,256	880	5,355	753
1980 . . . . .	542	1,207	815	4,872	722
1981 . . . . .	518	933	860	4,764	578
1982 . . . . .	628	1,356	832	4,941	502
1983 . . . . .	506	711	970	2,983	333
1984 . . . . .	627	1,705	1,021	6,789	642

**Tobacco**

Tobacco is a summer-growing annual which requires a temperate to tropical climate, adequate soil moisture and frost-free period of approximately five months. In Australia, all tobacco is grown under irrigation. Because of specialised requirements, production is limited to areas with suitable soils and climate. The main centres of production are the Mareeba-Dimbulah districts of north Queensland and Myrtleford in north-eastern Victoria. Other areas where tobacco is grown include Bundaberg, Beerwah and Texas (Queensland) and Yetman and Coraki (New South Wales). All tobacco grown in Australia is of the flue-cured type except for small quantities of burley tobacco produced mainly in Victoria.

## TOBACCO: AREA, PRODUCTION AND OVERSEAS TRADE

Year	Area	Production (dried leaf)	Exports (value f.o.b.)		Imports (value)	
			Unmanu- factured	Manu- factured	Unmanu- factured	Manu- factured
			'000 ha	'000 tonnes	\$'000	\$'000
1979-80 . . . . .	7.5	15.1	4,161	9,138	42,394	25,234
1980-81 . . . . .	7.1	14.5	2,893	8,559	44,007	31,129
1981-82 . . . . .	6.6	13.3	2,080	8,551	46,268	23,187
1982-83 . . . . .	6.7	13.4	4,835	9,667	52,916	30,420
1983-84 . . . . .	6.5	14.4	2,296	8,941	58,938	31,425
1984-85p . . . . .	5.3	n.y.a	n.y.a	n.y.a	59,789	27,692

**Marketing.** In 1965 the Commonwealth and State Governments agreed to a stabilisation plan which provided for an annual Australian tobacco leaf marketing quota of flue-cured tobacco and a guaranteed minimum average reserve price. The plan is administered by the Australian Tobacco Board, constituted under the *Tobacco Marketing Act 1965*, and is composed of representatives of the Commonwealth Government, tobacco-growing States, growers and manufacturers.

Following a review by the Industries Assistance Commission of the tobacco industry in 1982, the government announced a new 5 year stabilisation scheme which began in 1984. The new scheme is designed to rationalise marketing arrangements in the industry. The scheme provides that the annual tobacco leaf quotas are adjusted in line with consumption, that manufacturers' stocks are reduced to a level equivalent to 13 months' consumption by 1988, and that prices be adjusted so as to significantly reduce the gap between Australian and World prices by 1990.

**Hops**

Hops are grown from perennial rootstocks over deep, well-drained soils in localities sheltered from the wind. The hop-bearing vine shoots are carried upon trellises, from which they are later harvested. The green hops are kiln-dried and baled on the farm. The dried hops can be further processed at centralised processing establishments into pellets, extract or high density packs. The pelleted form constitutes the bulk of the exported hops.

The area planted to hops in Australia is about 1,300 hectares. About 65 per cent of plantings are in Tasmania (confined to the Derwent, Huon and Channel areas in the south-east, the Scottsdale-Ringarooma district in the north-east, and the Gunn Plains in the north-west of the State). The other hop producing areas are the Ovens and King Valleys in Victoria and a small area near Manjimup in Western Australia.

Australian hop production is about 2,600 tonnes, approximately 70 per cent of which is used by domestic breweries, with the remainder being exported.

**Mushrooms**

Statistics of mushroom growing were collected for the first time in all States for the year ended 30 June 1975.

## MUSHROOMS: AREA, PRODUCTION, GROSS VALUE AND IMPORTS

Year	Total production			Imports				
	Area	Quantity	Gross value	Canned or bottled production	Dried		Canned or bottled	
					Quantity	Value f.o.b.	Quantity	Value f.o.b.
	hectares	tonnes	\$m	tonnes	tonnes	\$'000	'000 litres	\$'000
1978-79 . . . . .	53	7,806	14.7	5,718	88	964	3,738	4,723
1979-80 . . . . .	57	8,340	16.9	4,793	93	1,082	4,482	5,486
1980-81 . . . . .	56	8,265	18.5	3,743	93	1,140	5,864	7,120
1981-82 . . . . .	57	9,382	21.7	4,776	120	1,478	6,413	8,454
1982-83 . . . . .	65	10,266	27.1	n.p.	58	895	5,845	8,447
1983-84 . . . . .	69	11,036	29.4	n.p.	94	1,447	4,760	7,218
1984-85p . . . . .	n.y.a.	n.y.a.	n.y.a.	n.p.	92	1,448	4,426	8,278

### Jojoba

Jojoba is an arid zone perennial shrub native to the Sonoran Desert in USA and Mexico where it has a reputation for its ability to survive and grow under extremely adverse conditions. About 50 per cent of seed weight consists of a high quality liquid wax suitable for a wide range of industrial applications.

Attempts are being made to establish a jojoba growing and processing industry in Australia using wild, unimproved planting material. A research backing is needed, and research in this country has investigated the environmental factors controlling flowering and fruit growth, the physiological basis of jojoba's adaptation to moisture and temperature extremes, and the sites with the best potential to support an industry.

The future development of a jojoba industry depends upon the use of improved, high-yielding plant lines and the selection of the best plantation sites. Although there are many proposed uses for the wax, future market size and price structure are unknown.

### Livestock

Since 1861, annual enumerations of livestock have been made based, with few exceptions, on actual collections made through the agency of the State police or by post. Particulars concerning the numbers of each of the principal kinds of livestock in Australia at ten-yearly intervals from 1861 to 1971, and then from 1980 on by single years, are given in the following table.

LIVESTOCK: AUSTRALIA, 1861 TO 1985  
(<sup>'000</sup>)

Year	Cattle	Sheep	Pigs	Year	Cattle	Sheep	Pigs
1861 . . . . .	3,958	20,135	351	1951 . . . . .	15,229	115,596	1,134
1871 . . . . .	4,276	41,594	543	1961 . . . . .	17,332	152,679	1,615
1881 . . . . .	7,527	62,184	816	1971 . . . . .	24,373	177,792	2,590
1891 . . . . .	10,300	97,881	891	1980 . . . . .	26,203	135,985	2,518
1901 . . . . .	8,640	70,603	950	1981 . . . . .	25,168	134,407	2,430
1911 . . . . .	11,745	98,066	1,026	1982 . . . . .	24,553	137,976	2,373
1921 . . . . .	13,500	81,796	674	1983 . . . . .	22,478	133,237	2,490
1931 . . . . .	11,721	110,568	1,072	1984 . . . . .	22,161	139,242	2,527
1941 . . . . .	13,256	122,694	1,797	1985 . . . . .	22,738	149,248	2,463

While livestock numbers (particularly sheep) have increased substantially since 1861, marked fluctuations have taken place during the period, mainly on account of widespread droughts which have from time to time left their impressions on the pastoral history of Australia.

Australia has suffered ten major widespread droughts since the keeping of rainfall records began:

1864-66 All States were affected except Tasmania.

1880-86 Southern and eastern mainland States were affected.

1888 All States were hit except Western Australia.

1895-1903 This drought, one of the worst on record, halved Australia's sheep population (originally 100 million) and cut cattle numbers (12 million) by 40 per cent.

1911-1916 Wheat crops were affected in most States, sheep numbers declined by 19 million and cattle by 2 million.

1918-1920 During this period parts of Western Australia were the only areas completely free from drought.

1939-1945 This prolonged drought affected crops and/or pastoral areas in all States. Sheep numbers fell from 125 million in 1942 to 96 million in 1945.

1965-1967 This drought, in its impact on Queensland, New South Wales and Victoria, ranked with the 1902 drought as one of the most severe on record. It resulted in a 40 per cent drop in the wheat harvest, a loss of 20 million sheep, and a decrease in farm income of \$300-500 million. There was a chain reaction to other industries, with heavy losses being suffered by manufacturers of farm machinery and the N.S.W. Railways.

Effects of the drought were worsened by water rationing in irrigation areas.

1972 Widespread drought occurred throughout Australia.

Much of eastern Australia experienced one of the worst droughts on record in 1982 and early 1983. Widespread and soaking rains during the autumn months of 1983 greatly alleviated the situation and most areas received further good rains during 1983-84. However, 1985 saw

the return of light and variable rainfall conditions. In July 1985, much of New South Wales and western Queensland had again been drought declared and regional areas of concern were notified in western Victoria, parts of South Australia and Western Australia, and much of the Northern Territory. Good rains during August 1985 relieved much of this problem.

For further details of droughts in Australia see Yearbook No. 54, pages 991-96 'Droughts in Australia'.

The years in which the numbers of livestock attained their peaks are as follows: cattle, 1976 (33,434,000); sheep, 1970 (180,080,000); and pigs, 1973 (3,259,000).

**Cattle**

Cattle-raising is carried out in all States, the main object in certain districts being the production of stock suitable for slaughtering purposes and in others the raising of dairy herds. While dairy cattle are restricted mainly to southern and to coastal districts, beef cattle are more widely distributed. Cattle numbers in Australia increased slowly during the 1960s and 1970s, despite seasonal vicissitudes and heavy slaughtering, to a peak of 33.4 million in 1976. There was a continuous decline, aggravated by drought conditions, to 22.2 million in 1984. Improved seasonal conditions and higher export prices in 1984 encouraged producers to commence rebuilding herds and numbers increased to 23.0 million in 1985.

Beef cattle production is often combined with cropping, dairying and sheep. In the north (north of the 26th parallel), cattle properties and herd size are very large, pastures are generally unimproved, fodder crops are rare and beef is usually the only product. The industry is more intensive in the south because of the more favourable environment including more improved pasture.

For further details on cattle see *Livestock and Livestock Products, Australia* (7221.0).

**CATTLE NUMBERS**

('000)

31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust. (incl. A.C.T.)
1980	6,097	4,252	10,332	1,067	2,065	649	1,727	26,203
1981	5,459	4,313	9,925	1,091	2,034	659	1,675	25,168
1982	5,429	4,121	9,782	1,013	1,942	628	1,624	24,553
1983	5,018	3,408	9,349	828	1,754	562	1,548	22,478
1984	5,036	3,487	9,154	813	1,730	542	1,390	22,161
1985p	5,190	3,568	9,395	844	1,713	554	1,461	22,738

**Classification of cattle**

**CATTLE NUMBERS, BY AGE, SEX, PURPOSE**

('000)

Classification	31 March					
	1980	1981	1982	1983	1984	1985p
<b>Milk cattle—</b>						
Bulls used or intended for service.	56	54	49	47	46	46
Cows, heifers and heifer calves	2,697	2,672	2,661	2,642	2,693	2,709
House cows and heifers.	77	74	73	69	68	65
Total.	2,830	2,799	2,783	2,757	2,805	2,820
<b>Meat cattle—</b>						
Bulls used or intended for service.	545	533	527	499	498	530
Cows and heifers (1 year and over)	11,727	11,269	11,032	9,929	9,964	10,225
Calves under 1 year.	5,445	5,135	5,023	4,644	4,455	4,915
Other cattle (1 year and over)	5,656	5,431	5,188	4,649	4,438	4,248
Total.	23,373	22,368	21,770	19,721	19,356	19,918
<b>Total, all cattle</b>	<b>26,203</b>	<b>25,168</b>	<b>24,553</b>	<b>22,478</b>	<b>22,161</b>	<b>22,738</b>

**Sheep**

With the exception of a short period in the early eighteen-sixties, when the flocks in Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep raising. Western Australia is the second largest sheep raising State followed by Victoria. Sheep numbers reached a peak of 180 million in Australia in 1970. They then declined rapidly up to March 1973 as producers turned off large numbers for slaughter and



moved from wool-growing towards grain and beef production. By 1975, the numbers had again increased to 151,653,000, but in March 1978 the numbers had fallen to 131,442,000, the lowest since 1955. Improved seasonal conditions during 1978 and 1979 enabled producers to begin rebuilding their flocks. By March 1980, numbers had risen to 136.0 million. Subsequently, high levels of drought-induced slaughter led to a decline in numbers to 134.4 million by March 1981. Numbers rose to 138.0 million in March 1982 with improved seasonal conditions and the attractiveness of sheep enterprises relative to cattle contributing to the growth in numbers. Subsequently, drought conditions saw the flock reduce to 133.2 million in March 1983. The increase in flock numbers to 139.2 million in March 1984 reflects flock rebuilding by producers in response to favourable seasonal conditions beginning in the autumn of 1983, improved lambing rates, and a favourable outlook for wool and live sheep enterprises. This trend continued and, in March 1985, flock numbers reached 149.2 million.

**SHEEP NUMBERS**  
(Millions)

31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (incl. N.T., A.C.T.)
1980	48.6	24.4	12.2	16.0	30.4	4.2	136.0
1981	46.0	25.5	10.6	17.1	30.8	4.4	134.4
1982	48.7	25.3	12.3	16.7	30.3	4.5	138.0
1983	48.1	22.7	12.2	15.4	30.2	4.5	133.2
1984	51.0	24.6	13.0	16.4	29.5	4.6	139.2
1985p	55.3	26.4	13.9	17.1	31.6	4.8	149.2

**SHEEP, BY AGE AND SEX**  
(Millions)

31 March	Sheep: 1 year and over				Lambs and hoggets (under 1 year)	Total, sheep and lambs
	Rams	Breeding ewes	Other ewes	Wethers		
1980	1.7	66.5	5.0	30.5	32.3	136.0
1981	1.8	66.9	4.8	30.1	30.8	134.4
1982	1.8	68.5	4.8	30.5	32.4	138.0
1983	1.7	65.6	5.5	28.8	31.6	133.2
1984	1.7	70.3	4.9	30.5	31.8	139.2
1985p	1.8	70.8	5.5	33.0	38.0	149.2

The combined value of wool and sheep slaughtered during 1983-84 is estimated (by the Bureau of Agricultural Economics) at 18 per cent of the gross value of agricultural commodities. This proportion varies with wool and meat prices and seasonal conditions. Australia has about 20 per cent of the world's woolled sheep but produces around 25 per cent of the world's greasy wool output. In addition, in 1984-85 the sheep industry produced 474,000 tonnes of mutton and lamb. Exports of live sheep for slaughter during 1984-85 totalled 6.3 million head, with Kuwait and Saudi Arabia accounting for 69 per cent of the total.

**SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS**  
(Millions)

Year ended 31 March	Number at beginning of season	Lambs marked	Live sheep exports	Sheep and lambs slaughtered (a)	Estimated deaths on farms (b)	Number at end of season
1980	134.2	45.8	5.3	30.2	8.5	136.0
1981	136.0	43.7	6.1	31.4	7.8	134.4
1982	134.4	44.8	6.3	28.3	6.6	138.0
1983	138.0	45.4	6.2	30.8	13.1	133.2
1984	133.2	44.5	6.3	24.7	7.5	139.2
1985p	139.2	51.2	6.3	25.6	9.8	149.2

(a) Comprises statistics from abattoirs and other major slaughtering establishments and includes estimates of animals slaughtered on farms and by country butchers; also includes animals condemned or those killed for boiling down. (b) Balance item.

LAMBING

Year ended 31 March	Number of breeding ewes	Mating intentions	Actual matings	Ratio of actual matings to intended matings	Lambs marked	Ratio of lambs marked to actual matings	Ratio of lambs marked to breeding ewes
	at start of season	at start of season		per cent		per cent	per cent
	million	million	million	per cent	million	per cent	per cent
1980 . . . . .	65.9	61.9	59.5	96	45.8	77	70
1981 . . . . .	66.5	60.3	58.1	96	43.7	75	66
1982 . . . . .	66.9	61.9	60.5	98	44.8	74	67
1983 . . . . .	68.5	64.6	60.9	94	45.3	74	66
1984 . . . . .	65.6	58.9	58.5	99	44.5	76	68
1985p . . . . .	70.3	65.9	63.2	96	51.7	82	74

Pigs

Over the past 30 years there has been significant changes to the structure of the Australian pig industry. Initially pigs were raised as part of a dairying operation where there were abundant supplies of liquid skim milk. Today, however, with introduction of factory separation of milk and cream, coupled with the low grain prices of the 1960s, pig raising has become more and more associated with grain production.

In addition there has been a major move away from the so called extensive method of pig raising to the intensive conditions that apply today. This has meant an increase in the capital investment in the industry and a greater degree of specialisation in pig raising. The average pig production unit today would be based on approximately 300 sows with feeds being almost exclusively grain based. While the number of sows in Australia has remained fairly constant the number of pig farmers has decreased.

PIG NUMBERS  
(’000)

31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (incl. N.T., A.C.T.)
1980 . . . . .	829	422	510	398	293	63	2,518
1981 . . . . .	787	400	502	394	289	54	2,430
1982 . . . . .	766	406	513	374	263	47	2,373
1983 . . . . .	794	387	551	405	300	43	2,490
1984 . . . . .	799	404	556	417	300	48	2,527
1985p . . . . .	783	403	555	399	273	47	2,463

Poultry

The commercial poultry industry comprising hatcherymen, egg producers and broiler growers is highly specialised, although a proportion of production comes from ‘backyard’ egg producers, roughly estimated at from 20 to 25 per cent of the total. There are also separate research schemes funded jointly by industry and government for the egg and meat chicken industries but close liaison exists. Both sectors are good examples of specialised, large scale, capital-intensive production.

POULTRY NUMBERS (a)  
(’000)

31 March	Chickens			Other poultry			Total all poultry
	Hens and pullets for egg production	Meat strain chickens (broilers)	Total chickens(b)	Ducks	Turkeys	Other poultry	
1980 . . . . .	14,846	29,967	46,749	272	1,016	218	48,255
1981 . . . . .	15,187	29,077	46,386	228	750	175	47,539
1982 . . . . .	14,930	27,478	44,761	317	713	213	46,004
1983 . . . . .	15,532	30,296	48,389	294	467	243	49,393
1984 . . . . .	14,075	31,318	47,529	370	535	239	48,673
1985p . . . . .	13,159	37,557	53,576	265	717	275	54,833

(a) Data are for numbers of poultry on agricultural establishments as reported in the annual Agricultural Census.  
(b) Includes breeding stock and data not available for separate publication.

For further details on pigs and poultry see the publication *Livestock and Livestock Products, Australia* (7221.0).

### Meat production, slaughterings and other disposals

The ABS collects details of slaughterings and meat production from abattoirs, commercial poultry and other slaughtering establishments and includes estimates of animals slaughtered on farms and by country butchers. The data relate only to slaughterings for human consumption and do not include animals condemned or those killed for boiling down.

PRODUCTION OF MEAT BY TYPE (a)  
( '000 tonnes)

Year	Carcass weight					Dressed weight(b)		
	Beef	Veal	Mutton	Lamb	Pig meat	Total meat	Chickens	Total all poultry(c)
1979-80 . . . . .	1,510	54	275	272	218	2,330	282	313
1980-81 . . . . .	1,418	50	299	279	233	2,278	276	303
1981-82 . . . . .	1,526	50	234	277	228	2,316	259	286
1982-83 . . . . .	1,481	61	250	280	239	2,313	283	313
1983-84 . . . . .	1,296	42	164	293	253	2,048	272	298
1984-85p . . . . .	1,229	38	202	273	258	2,000	311	340

(a) Excludes offal. (b) Dressed weight of whole birds, pieces and giblets. (c) Includes other fowls, turkeys, ducks and drakes.

PRODUCTION OF MEAT: AUSTRALIA, 1939-40 TO 1984-85

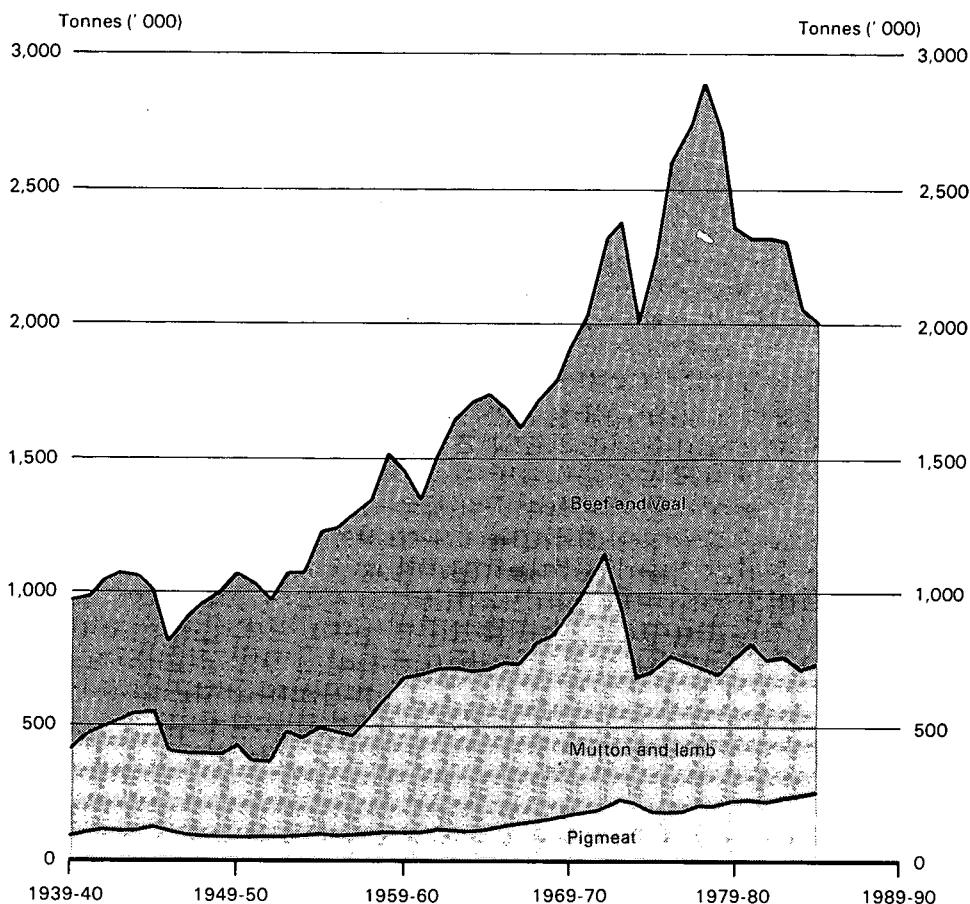


PLATE 35

**NUMBERS OF LIVESTOCK AND POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION**  
(Million head)

<i>Year</i>	<i>Cattle</i>	<i>Calves</i>	<i>Sheep</i>	<i>Lambs</i>	<i>Pigs</i>	<i>Chickens (a)</i>	<i>Other fowls (b) and turkeys</i>	<i>Ducks and drakes</i>
1979-80 . . . . .	7.4	1.5	14.1	16.4	3.9	222.5	11.3	2.2
1980-81 . . . . .	7.0	1.5	15.2	16.6	4.2	221.7	11.2	1.7
1981-82 . . . . .	7.2	1.5	11.9	16.3	4.1	205.9	10.0	2.0
1982-83 . . . . .	7.4	1.7	13.1	16.9	4.2	226.2	10.9	1.9
1983-84 . . . . .	6.0	1.3	8.1	16.9	4.4	216.3	10.2	1.7
1984-85p . . . . .	5.6	1.2	9.9	16.2	4.4	241.9	10.4	2.1

(a) Comprises broilers, fryers and roasters.

(b) Comprises hens, roosters, etc.

### Mutton and Lamb

Production of sheepmeats in Australia is closely associated with the wool industry. Sheep grazing often occurs on mixed farms in conjunction with beef and/or grain enterprises and in some areas producers specialise in lamb production. The supply of sheepmeat depends greatly on seasonal conditions, decisions to build up or reduce flock numbers, expectations of wool prices, live sheep exports and the pattern of domestic consumption of meat.

There was a movement out of sheep raising in Australia early in the 1970s, principally as a result of low wool prices, and many producers diversified into cattle and grains. Flock numbers declined from a peak of 180 million in 1970 to a low of 131 million by 1978. After 1978, wool and sheepmeat prices improved and the trade in live sheep for slaughter overseas continued to expand. As a result the national flock size increased slightly to 136 million by March 1980. Since March 1980, flock numbers have fluctuated as a result of climatic and market conditions peaking at 138.0 million in March 1982, before dropping to 133.2 million in March 1983. Total Australian sheep flock in March 1985 is estimated at 149.2 million head.

Sheepmeat production declined rapidly from the high levels of the early 1970s, which were associated with flock reduction, to annual levels of between 400,000 and 600,000 tonnes from 1973-74. Lamb production has remained close to 280,000 tonnes per year, while mutton production has varied between 230,000-300,000 tonnes in recent years until 1983-84, when it declined to 164,000 tonnes. Production increased to 202,000 tonnes in 1984-85.

A high proportion of lamb is consumed in Australia with per capita consumption remaining steady at about 14-16 kilograms per year. A high proportion of mutton produced is exported. Australia is the world's largest exporter of mutton, with Japan and the Middle East being the main markets.

Live sheep and lamb exports for slaughter during 1984-85 totalled 6.3 million head. During 1983-84 live sheep and lambs exported for slaughter totalled 6.8 million head.

### Beef and Veal

The cattle industry is very dependent on international trade in beef and is subject to great fluctuations. About half of Australia's beef and veal production is exported, with the U.S.A. and Japan the main outlets.

Beef and veal production in Australia rose markedly in the seventies, reaching peak levels of over 2 million tonnes in 1977-78 and 1978-79, but declining to 1.3 million tonnes in 1984-85. The increase in production followed the rapid expansion of the beef herd that had occurred during the late sixties and early seventies mainly in response to relatively profitable beef prices and increased demand from overseas markets.

In the mid 1970s, poor economic conditions and heavy domestic supplies of beef in major importing countries led them to impose severe restrictions on their imports. With reduced international demand and heavy supplies in Australia, saleyard prices fell greatly and remained low for about four years. The depressed conditions were accompanied by a severe reduction in the national herd.

Improved seasonal conditions during 1983, accompanied by strengthening overseas demand, resulted in a move towards herd rebuilding. However, the high level of drought induced slaughterings during 1982 had reduced the breeding herd base implying very slow herd expansion until 1986. The decline in production reflects a move towards herd rebuilding by producers. Cattle numbers are currently projected by the AMLC to steadily increase

throughout the 1980s. The lower levels of slaughter accompanying the rebuilding process suggest only modest increases in the levels of beef and veal production in coming years. Export demand for beef during 1984-85 improved, in part due to the depreciation of the Australian dollar. Saleyard prices of cattle firmed due to strong competitive demand between graziers and cattle fatteners for a limited supply of cattle.

### Pigmeat

Significant changes have taken place in the pig producing industry in recent years. Capital investment and corporate takeovers have seen the emergence of a few large companies producing 30 per cent of all pigs sold in Australia. These moves on top of the trend to more intensive and efficient production techniques have seen pigmeat production rise steadily since 1982 to reach 258,000 tonnes in 1984-85. In addition, there has been an increase in the slaughter weights of pigs reflecting the demands of the fresh pork trade.

It is believed that about 60 per cent of production is processed into bacon, hams and smallgoods, with the rest sold as fresh pork. Less than 2 per cent of the industry's output is exported. The increasing production of pigmeat therefore reflects a steady increase in per capita domestic consumption over the past three years.

In recent years a small but useful market for the meat of feral pigs has been established in Europe.

Prices paid for pigs at auction have varied quite markedly in recent years. However, producers have benefitted from lower prices for feed grains which have prevailed over the past two years.

### Poultry meat

The poultry meat industry developed rapidly in the 1970s with both output and consumption rising steeply although in recent years production has exceeded demand and excess production capacity in the industry continues. Genetic and technical improvements and the organisation of the industry into large-scale enterprises have raised efficiency and helped to reduce production costs relative to other meats. The price competitiveness of chicken meat compared with other meats, especially beef, continues to improve, consolidating the position of poultry meat as the second most important meat after beef in Australian diets.

#### EXPORTS OF FRESH, CHILLED OR FROZEN MEAT

Year	Beef	Veal	Mutton	Lamb	Pork	Poultry
QUANTITY (a) ('000 tonnes)						
1979-80 . . . . .	846.6	17.4	182.1	49.6	1.9	7.3
1980-81 . . . . .	753.7	13.6	241.5	39.4	2.4	7.7
1981-82 . . . . .	775.2	8.5	154.6	32.1	1.5	4.1
1982-83 . . . . .	817.2	10.1	201.1	36.9	1.8	2.2
1983-84 . . . . .	657.0	5.4	90.8	33.2	2.0	1.2
1984-85p . . . . .	604.1	7.0	98.1	29.2	3.3	1.2
VALUE f.o.b. (\$ million)						
1979-80 . . . . .	1,295.6	31.9	172.6	62.4	3.7	10.6
1980-81 . . . . .	1,086.4	22.9	248.2	62.3	5.7	12.1
1981-82 . . . . .	1,009.8	14.4	155.3	50.7	3.1	7.3
1982-83 . . . . .	1,164.8	17.9	167.1	61.1	5.4	4.4
1983-84 . . . . .	1,108.3	11.9	84.0	53.4	6.2	2.5
1984-85p . . . . .	1,061.4	16.1	91.7	51.1	11.9	2.5

(a) Quantity data on beef, veal, mutton and lamb exports are shown in carcass weight equivalents.

### Exports of live animals

Countries of the Middle East continue to be the major importers of live sheep for slaughter with Kuwait and Saudi Arabia accounting for 69 per cent of the total. Exports of slaughter sheep declined from 6.8 million in 1983-84 to 6.3 million in 1984-85 while breeding sheep increased significantly from 403 in 1983-84 to 3,907 in 1984-85. A consignment of 2,398 crossbred ewes to Saudi Arabia accounted for most of this increase.

Live cattle exports from Australia totalled 48,775 head during 1984-85 compared with 81,687 head the previous year.

While the number of cattle exported for slaughter increased by 1,500 during 1984-85, exports of breeding cattle decreased by 35,000. This decrease reflected a decision by the South Korean Government to cease imports of breeding cattle. (South Korea imported

31,147 head from Australia in 1983-84.). Indonesia became the main buyer of breeding cattle taking 72 per cent of exports. Malaysia, with 18,026 head (up from 15,188), was the main destination for slaughter cattle.

For details of the regulation governing the export (and import) of live animals see Year Book No. 61 page 848.

**EXPORTS OF LIVE ANIMALS**

Year	Livestock			Poultry		
	Sheep and lambs	Total(a)		Day old chicks	Total	
		Number	Value f.o.b.		Number	Value f.o.b.
		—'000—	\$'000		—'000—	\$'000
1979-80 . . . . .	6,162	6,225	192,668	409	710	747
1980-81 . . . . .	5,740	5,842	208,483	862	974	832
1981-82 . . . . .	6,009	6,112	214,886	809	935	720
1982-83 . . . . .	6,992	7,086	212,277	370	415	565
1983-84 . . . . .	6,349	6,434	228,481	477	568	693
1984-85p . . . . .	6,256	6,312	214,219	234	369	503

(a) Also includes cattle, calves, buffaloes and pigs.

**PRODUCTION AND EXPORT OF BACON, HAM AND CANNED MEAT**

Year	Production			Exports			
	Bacon and ham(a)		Canned meat(b)	Bacon and ham(c)		Canned meat(d)	
	Bone-in	Bone-out		Quantity	Value	Quantity	Value
				\$'000		\$'000	
	tonnes	tonnes	tonnes	tonnes	f.o.b.	tonnes	f.o.b.
1979-80 . . . . .	18,147	52,811	39,178	861	2,734	21,581	51,552
1980-81 . . . . .	18,878	55,564	36,431	528	1,991	17,400	42,139
1981-82 . . . . .	18,112	57,818	34,590	523	1,959	19,651	50,461
1982-83 . . . . .	17,051	55,634	n.a.	515	2,292	21,587	58,704
1983-84 . . . . .	17,973	59,023	n.a.	592	2,316	18,571	57,658
1984-85p . . . . .	17,384	60,153	n.a.	316	1,322	17,714	54,267

(a) Production of bacon and ham 'on the bone' is shown in terms of 'bone-in' weight, while production of boneless bacon and ham is shown in terms of 'bone-out' weight. Production of canned bacon and ham, which is reported in terms of 'stated net weight of packs', is included in the 'bone-out' category. (b) Canned weight. Includes bacon, ham and meat and vegetables, but excludes rabbit, poultry and baby foods. (c) Cured carcass weight of smoked or cooked bacon and ham. Includes 'stated net weight of packs' of canned bacon and ham. (d) Canned weight; excludes canned bacon and ham.

**GROSS VALUE OF LIVESTOCK SLAUGHTERINGS AND OTHER DISPOSALS(a)**

(\$ million)

Year	Cattle and calves	Sheep and lambs	Pigs	Poultry	Total
1979-80 . . . . .	2,386.0	654.3	311.3	307.2	3,658.8
1980-81 . . . . .	2,056.5	718.9	337.5	361.4	3,474.3
1981-82 . . . . .	1,890.1	646.7	396.1	362.7	3,295.6
1982-83 . . . . .	2,076.2	548.0	414.9	413.1	3,452.2
1983-84 . . . . .	2,037.5	562.1	373.7	419.4	3,392.8
1984-85p . . . . .	2,118.9	539.5	435.2	468.4	3,562.1

(a) Includes adjustment for net exports of live animals

**Consumption**

The methodology for calculating meat consumption has been revised for the years 1975-76 to 1983-84 and is now shown purely in carcass weight equivalent terms. Canned meat as such is not available. Carcass weight is defined as ex abattoir (ie bone in). Owing to diverse cutting practices by butchers and the difficulty in clearly defining 'retail weight of meat' it is considered impractical to derive a factor for the purpose of expressing estimated meat consumption in terms of retail weight. (Estimates of retail weight as a percentage of carcass weight range from 70 percent for beef, 80 to 85 percent for lamb and 80 percent for pork.)

## APPARENT CONSUMPTION OF MEAT AND MEAT PRODUCTS AS HUMAN FOOD

Year	Beef and veal	Mutton	Lamb	Pigmeat (a)	Offal	Total meat	Poultry meat
TOTAL ('000 tonnes)							
1979-80	729	77	226	213	57	1,302	295
1980-81	728	77	234	233	62	1,344	301
1981-82	786	57	245	228	66	1,382	294
1982-83	740	72	247	234	67	1,360	311
1983-84	685	80	258	256	62	1,340	309
1984-85p	664	93	239	256	68	1,320	342
PER CAPITA PER YEAR (kg)							
1979-80	49.9	5.2	15.5	14.6	3.9	89.2	20.2
1980-81	49.2	5.2	15.8	15.7	4.2	90.1	20.3
1981-82	52.2	3.8	16.3	15.2	4.4	91.8	19.6
1982-83	48.4	4.7	16.2	15.3	4.4	89.0	20.4
1983-84	44.3	5.1	16.7	16.5	4.0	86.7	20.0
1984-85p	42.7	6.0	15.4	16.4	4.3	84.8	22.0

(a) Includes pigmeat products such as bacon and ham.

NOTE: Beef, veal, mutton, lamb, pigmeat and offal are expressed in terms of carcass weight, and poultry meat in dressed weight.

For further details on meat production and slaughtering see the following publications: *Livestock and Livestock Products, Australia (7221.0)*, *Value of Agricultural Commodities Produced, Australia (7503.0)* and *Apparent Consumption of Foodstuffs and Nutrients, Australia (4306.0)*.

#### Australia Meat and Live-stock Corporation

Legislation was enacted to establish the Australian Meat and Live-stock Corporation (AMLC) from 1 December 1977. The Corporation, which regulates and promotes the export of both meat and livestock and the promotion of domestic consumption, replaced the Australian Meat Board.

In mid-1984 the Australian government introduced measures to restructure the administration of the Australian livestock and meat industry. Legislation enacted at the time, or foreshadowed, had three primary components:

- a restructured AMLC;
- establishment of the Australian Meat & Livestock Industry Policy Council (AMLIPC); and
- the foreshadowed replacement of the Australian Meat Research Committee (AMRC) with an incorporated body called the Australian Meat and Livestock Research and Development Corporation (AMLRDC).

The AMLC has the power to trade in meat and livestock in a manner which accords with adopted policy and with normal commercial practice. Its power is also extended to engaging in sole trading or to permitting restricted trading by a specified holder or holders of meat or livestock licences. The exercise of this sole or restricted trading power is limited to circumstances where: a monopoly buying power is, in the AMLC's opinion, distorting normal market forces; such action is necessary or desirable to ensure that producers receive a fair return for the meat or livestock exported to that market; the exercise of sole trading powers would be beneficial for the development or further development of that market; the exercise of sole trading powers would be in the best commercial interests of the industry.

In order to foster consultation, the AMLC may, for the purposes of considering any matter relating to the performance of its functions, make arrangements for consulting persons and bodies representative of different sectors of the industry.

The AMLC's main functions are: to improve the production of meat and livestock in Australia; to encourage and promote the consumption and sale of Australian meat, and the sale of Australian livestock, both in Australia and overseas; and to encourage, assist, promote and control the export of meat and livestock from Australia.

Exporters of meat and livestock are licenced by the AMLC and have to comply with its requirements in relation to export trading. The AMLC assists exporters in overseas market development and conducts meat promotion activities in Australia and abroad. It has authority also, to perform a wide range of other functions aimed at improving the production of meat and livestock for the general benefit of the meat and livestock industry.

**Australian Meat and Livestock Industry Policy Council**

The legislation referred to above established a new statutory body, the AMLIPC, to take over, from the AMLC, responsibility for the examination of all broad industry policy issues. It is intended that AMLIPC:

- facilitate the participation of industry in the *development and formulation of industry policies*;
- *provide a forum of consensus*, building between different sectoral interests within the industry; and
- provide opportunities, through AMLIPC Working Groups, for all interested parties to work together on the factual examination of industry problems, and *to present practical proposals to government for their solution*.

**Wool**

The Australian Sheep Flock contains nearly 20 per cent of the world's sheep, and produces over 26 per cent of the total annual production of wool. Approximately 75 per cent of the Australian Flock are of a single breed, the Merino, raised primarily for its heavy fleeces of fine quality wool.

**Wool production**

Wool as shorn from the sheep ('greasy wool') contains an appreciable amount of grease, dirt, vegetable matter and other extraneous material other than the clean wool fibre. The exact quantity of these impurities in the fleece varies between countries, differing climatic and pastoral conditions, with seasonal fluctuations and with the breed and condition of the sheep. It is, however, the clean wool fibre that is ultimately consumed by the textile industry and the term 'clean yield' is used to express the net wool fibre content present in greasy wool.

Since the 1946-47 season, the average clean yield of Australian wool has been assessed annually. In the early years, the average clean yield was assessed on the basis of a small number of tests and subjective appraisal but in recent years the Australian Wool Corporation has calculated the clip average yield on the basis of laboratory tests of yield applied to nearly all wool offered for sale at auction in Australia. During the period of assessment the clean yield showed a continuous rise up to 1951-52, when it reached 57.5 per cent. It was 61.94 per cent in 1984-85.

Wool scoured and carbonised in Australia before export, however, has a somewhat lower clean yield than the whole clip, because much of the greasy wool treated locally for export in this form is dirty low-grade wool. The quantity of scoured and carbonised wool exported during 1984-85 was about 12 per cent of total raw wool exports in greasy terms. For the clean yield of Australian scoured wools exported a standard factor of 93 per cent has been adopted.

The following table shows details of total wool (i.e. shorn, dead, fellmongered and exported on skins) as well as the numbers of animals shorn, the average fleece weight and the gross value of the wool. A graph showing the production of wool in relation to the number of sheep appears on page 291.

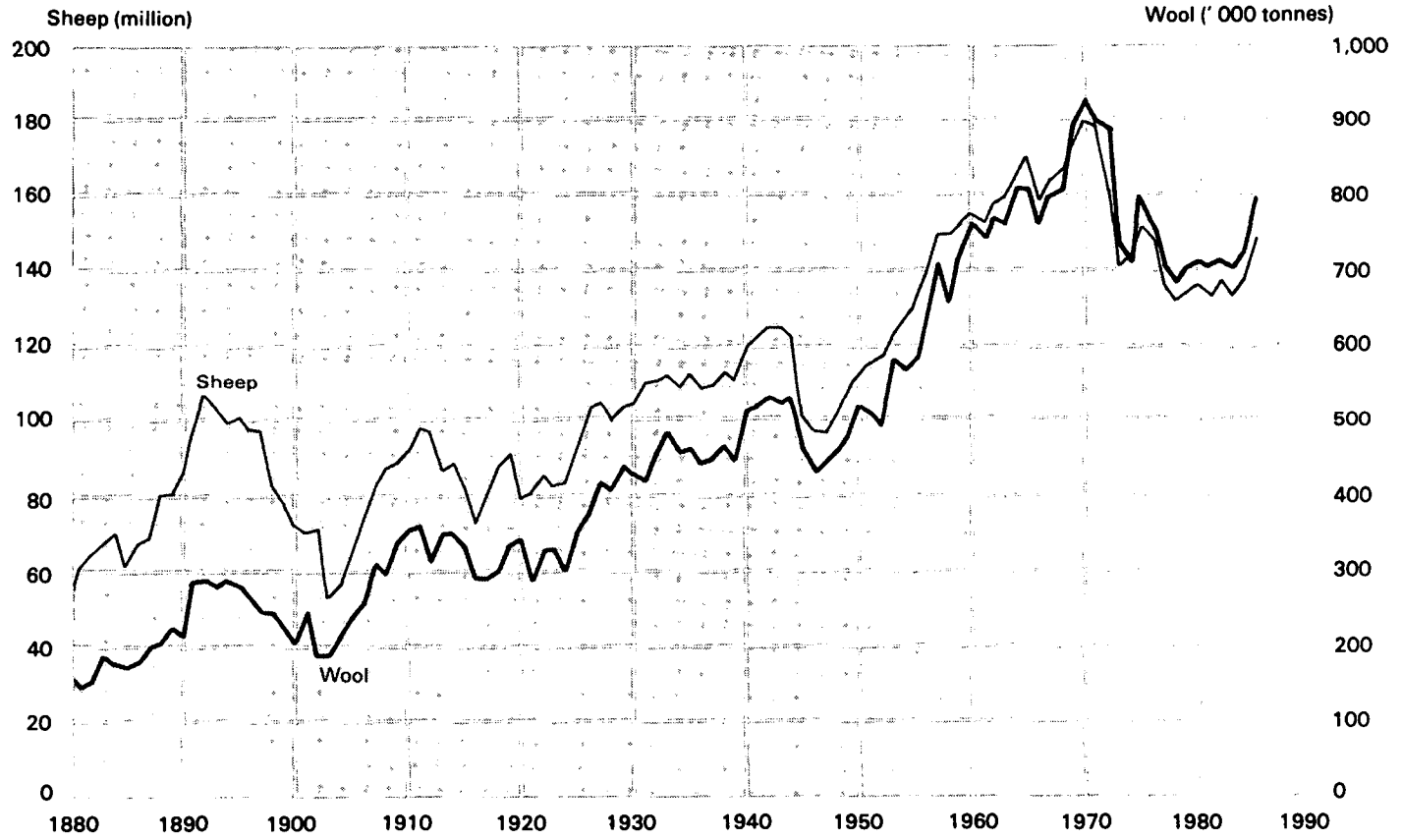
**SHEARING, WOOL PRODUCTION AND VALUE**

Year	Wool production					
	Sheep and lambs shorn	Average fleece weight	Total wool			Gross value (b)
			Shorn wool	Other wool(a)	Quantity	
	million	kg	'000 tonnes	'000 tonnes	'000 tonnes	\$m
1979-80	148.5	4.33	642.4	66.1	708.5	1,651
1980-81	150.0	4.25	637.9	63.3	701.2	1,670
1981-82	155.2	4.26	661.0	56.2	717.2	1,789
1982-83	149.1	4.30	641.5	60.2	701.7	1,761
1983-84	152.4	4.41	672.6	56.3	728.9	2,016
1984-85p	166.8	4.43	738.5	61.3	800.0	2,321

(a) Comprises dead and fellmongered wool, and wool exported on skins. (b) Gross value is based, for shorn wool, upon the average price realised for greasy wool sold at auction and, for skin wools, on prices recorded by fellmongers and skin exporters.



**SHEEP NUMBERS AND WOOL PRODUCTION: AUSTRALIA, 1880 TO 1985**



**PLATE 36**

### The wool market

The principal method used by wool growers in selling their wool is through public auction. Individual wool growers consign their clips to one of a number of wool selling brokers who arrange for it to be stored, and sampled for laboratory specification, and who make arrangements for the wool to be valued and offered at a rostered sale.

The proportion of the clip sold at auction varies from year to year but is in the order of 80 per cent of all wool grown. It is at such sales that the Australian Wool Corporation provides reserve price support. The remaining 20 per cent is sold privately, a transaction price is agreed between buyer and seller and the sale concluded without the presence of other parties and without the direct protection of the Reserve Price Scheme. Private selling has the greatest following in Western Australia while New South Wales, Victoria and South Australia are also strong supporters.

### Wool receivals

Under the terms of the Wool Tax Acts, all growers pay a tax on the gross value of shorn wool sales, to provide financial backing for wool promotion, research and the operation of a statutory Reserve Price Scheme. The ABS collects details of the total amounts of taxable wool received by wool selling brokers and dealers each year. These figures exclude wool received by brokers on which tax had already been paid by other dealers (private buyers) or brokers.

#### TAXABLE WOOL RECEIVALS

Year	Receivals			Dealers as per cent of total receivals	Shorn wool production(b)
	Brokers (NCWSB)	Dealers(a)	Brokers and dealers		
		—'000 tonnes—		per cent	'000 tonnes
1979-80 . . . . .	483.1	175.2	658.2	26.6	642.4
1980-81 . . . . .	523.8	134.2	658.0	20.4	637.9
1981-82 . . . . .	539.0	141.4	680.4	20.8	661.0
1982-83 . . . . .	516.0	141.2	657.2	21.5	641.5
1983-84 . . . . .	543.9	152.9	696.9	21.9	672.6
1984-85p . . . . .	603.2	161.5	764.7	21.1	738.5

(a) Includes brokers who are not members of the National Council of Wool Selling Brokers of Australia (NCWSB).  
from the annual Agricultural Census.

(b) Obtained

### Wool marketing arrangements

The Australian Wool Corporation (AWC), a Commonwealth statutory authority, established on 1 January 1973 through the amalgamation of the former Australian Wool Commission and Australian Wool Board, performs a number of functions within the market aimed at encouraging the demand for Australian wool and assisting the efficient and orderly disposal of the national clip. Central to these activities is a Reserve Price Scheme, operated by the Corporation on behalf of the woolgrowing industry. This scheme was introduced with the formation of the Australian Wool Commission in November 1970. Its purpose is to provide a measure of stability in wool prices to the benefit of the industry.

Initially, the Reserve Price Scheme was operated on a flexible basis whereby the Commission, and later the Corporation, bought wool which failed to reach a reserve price determined on a day-to-day basis. Since September 1974, as part of the reserve price program, the Corporation has been authorised to operate a floor price scheme. Under the floor price arrangements the Government sets a minimum average price for wool at the beginning of each season, expressed in terms of the Australian Wool Corporation's Market Indicator, or clip average clean price. The Corporation sets minimum prices for each wool type based on the Government's indicator floor price and purchases wool at auction which does not attract bids above the level of the appropriate floor price for that type. The Corporation has, from time to time in the past, operated a flexible reserve price scheme above the level of the floor price to prevent 'pot-holes' in the market. The wool purchased by the Corporation is held in stock, some of it in Australia and some overseas, and sold when prices improve with a view to stabilising the market.

In order to finance losses arising from the Corporation's reserve price activities woolgrowers have, since September 1974, been paying 5 per cent of gross proceeds from the sale of shorn wool into a special Corporation administered fund called the Market Support Fund.

When the Fund was established, wool demand was extremely depressed. However, the market improved in subsequent years and the level of the Fund rose to about \$493 million

at the end of 1980-81. This balance was well in excess of requirements for market support purposes and the Government agreed to woolgrowers' strong requests for legislation to allow for a progressive return of contributions paid into the fund. Since June 1981, three separate refunds totalling \$317 million have been made to woolgrowers from the Fund, in respect of market support contributions paid in the years 1974-75 to 1976-77. Due to depressed market conditions during the latter part of the 1983-84 season, no refund was made from the Fund in 1984-85. A fourth refund of up to \$56.3 million, in respect of contributions paid in 1977-78, commenced in the latter part of 1985. The Market Support Fund at the end of the 1984-85 season, stood at \$890 million.

The Australian Wool Corporation has a number of other responsibilities which include wool promotion, wool research, participation in negotiations in respect of shipping freight rates, administration of wool stores and the encouragement of greater efficiency within the existing wool marketing system.

### **Wool testing**

The Australian Wool Testing Authority came into existence in 1957 but its role became more prominent with the introduction, in 1971, of wool valuation techniques relying on objective specification of wool's main physical characteristics. From the first sales of wool in this manner in the early 1970s this technique has achieved universal acceptance and now more than 90 per cent of all wool sold at auction is accompanied by certified measurements for yield, (i.e. the amount of clean wool fibre), average fibre diameter and the percentage and type of vegetable fault.

At the direction of the Commonwealth Government, the Authority, which had operated as a division of the Corporation, was transferred to the private sector effective from the beginning of July 1982. The new company is known as AWT Ltd.

### **Wool promotion**

The Australian Wool Corporation is responsible for the promotion of the greater use of wool in Australia while the International Wool Secretariat (IWS) is responsible for wool promotion overseas. The cost of promotion is shared by the Government and the woolgrowing industry. The woolgrowers' contribution for promotion is raised by means of a tax on wool sale proceeds which is currently at the rate of 2.5 per cent (part of a total 3 per cent levy used to finance both wool research and promotion). The Commonwealth's contribution to wool promotion for five years commencing 1983-84 has been set at 1.2 per cent of gross wool sales revenue, resulting in Government contributions of \$26.4 million in 1984-85, and it is expected that this could rise to over \$30 million in 1985-86. Most of the promotion funds are remitted to the IWS with headquarters in London. Australia provides approximately two thirds of the IWS budget.

### **Wool research**

The wool research program covers five broad areas; research into wool production, wool harvesting and distribution, and economic and textile research. Wool research activities funded from the Wool Research Trust Fund (WRTF) are financed by growers and the Government on a 50:50 basis with the growers' contribution raised by means of a 0.5 per cent levy on wool sale proceeds (part of the total 3 per cent levy mentioned above). In addition to the wool research funded in this manner, the CSIRO, and the Bureau of Agricultural Economics, carry out considerable additional wool research funded from Consolidated Revenue.

### **Wool income**

Fluctuations in wool prices have a marked effect on agricultural and national income. In 1945-46 the gross value of wool production was \$117.2 million, representing 17.4 per cent of the gross value of all agricultural commodities produced, while in 1950-51, when prices reached a peak during the Korean War, wool was valued at \$1,303.8 million, or 55.6 per cent of total agricultural industries. More recent figures for the contribution of wool income to total agricultural production and national exports reflect the growth in other commodities over the intervening years, rather than a decline in the fortunes of the wool industry.

## WOOL INCOME (per cent)

<i>Year</i>	<i>Value of wool as a per cent of total agriculture</i>	<i>Value of wool exports as a per cent of total Australian exports</i>
1979-80 . . . . .	14.0	9.6
1980-81 . . . . .	14.4	10.2
1981-82 . . . . .	14.1	10.2
1982-83 . . . . .	15.0	8.5
1983-84 . . . . .	13.2	8.7
1984-85p . . . . .	15.1	8.7

**Stocks**

Stocks shown below of raw and semi-processed wool were held by wool processors, scourers, fellmongers, brokers, dealers and the Australian Wool Corporation. They exclude wool on skins since this wool is not recorded as production until fellmongered in Australia or exported on skins.

## WOOL STOCKS

('000 tonnes)

<i>At 30 June</i>	<i>Stocks of—</i>					
	<i>Raw Wool</i>		<i>Semi-processed wool</i>		<i>Total wool</i>	
	<i>Greasy</i>	<i>Clean</i>	<i>Greasy</i>	<i>Clean</i>	<i>Greasy</i>	<i>Clean</i>
1979 . . . . .	162.0	96.4	9.2	5.5	171.0	101.9
1980 . . . . .	168.7	101.1	11.3	6.9	180.1	108.0
1981 . . . . .	153.2	91.6	10.8	6.5	163.9	98.1
1982 . . . . .	206.4	124.5	8.5	5.0	214.6	129.5
1983 . . . . .	n.a	n.a	8.2	4.9	319.1	191.1
1984 . . . . .	n.a	n.a	9.6	5.9	376.6	250.9

**Wool processing**

Approximately 85 per cent of all wool passing through the Australian auction system comprises combing fleece and oddment types which are ultimately processed on the worsted system. The remaining 15 per cent, being the shorter or carding wools such as locks, crutchings, and lambs wool, is directed to the woollen system. This latter group is boosted some 5-10 per cent by noils combed out during worsted processing.

At present about two thirds of total carding types produced are processed in Australia.

During the 1970s there was a trend to increased early stage processing of Australian wool before export. Recently, however, early stage processing has stabilised at around 18 per cent of wool production. Over 95 per cent of total Australian wool production ultimately enters international trade.

The main scope for expanded domestic processing remains with worsted types for export in scoured or combed top form. Japanese processors initiated the export of scoured worsted types from Australia and Japan became Australia's major export market for scoured wool in 1973-74.

Before 1975 the wool processing industry was largely centralised in cities close to major ports. Since then, however, a general trend towards decentralised inland locations has occurred.

**Wool consumption**

Two series of calculations on Australian wool consumption are shown below.

1. Consumption of raw wool, which measures consumption in terms of scoured wool used by mills.
2. Consumption of processed wool, which is calculated from the usage of woollen and worsted yarn.

Raw wool comprises greasy, slipe, scoured and carbonised wool. This series has been included for comparison purposes with other countries.

This second series is considered to be a more satisfactory measure of Australian wool consumption, principally because allowance is made for significant quantities of wool tops exported. However, both series relate to consumption of wool by the wool textile industry, and should not be used as measures of consumption of wool at retail level. It has not been possible to estimate wool consumption at retail level because of the impracticability of obtaining reliable data concerning the wool content of the multiplicity of woollen and worsted piece-goods.

#### CONSUMPTION OF RAW AND PROCESSED WOOL

('000 tonnes)

Year	Consumption of raw wool		Consumption of processed wool					
	Greasy	Clean	Worsted yarn used(a)		Woollen yarn used(b)		Total	
			Greasy	Clean	Greasy	Clean	Greasy	Clean
1978-79 . . . . .	50.4	30.8	11.8	7.1	14.2	9.0	27.1	16.6
1979-80 . . . . .	52.3	30.9	11.7	6.8	14.7	9.0	27.5	16.3
1980-81 . . . . .	51.9	31.0	9.4	5.5	14.5	8.9	25.1	15.0
1981-82 . . . . .	55.5	33.1	8.7	5.1	15.3	9.5	25.1	15.1
1982-83 . . . . .	53.9	32.3	9.9	5.8	13.1	8.2	22.2	14.6
1983-84 . . . . .	55.0	32.8	10.2	6.0	14.6	9.0	25.9	15.6

(a) Wool content of yarns containing a mixture of wool and other fibres.

(b) Comprises pure and mixed woollen yarn.

#### Exports of wool

From its earliest days the Australian wool industry has been export oriented, and today approximately 95 per cent of total annual production of wool is exported.

The great bulk of this leaves the country in its natural 'greasy' state, but increasing quantities are being exported in part processed forms (i.e. scoured, carbonised, top and noil) and as wool on skins.

#### EXPORTS OF WOOL

Year	Selected exports ('000 tonnes: greasy basis)			Total exports	
	Greasy and slipe	Scoured and carbonised	Exported on skins	Greasy basis (a)	Value f.o.b.
1979-80 . . . . .		505.3	93.2	59.5	'000 tonnes \$m 681.4 1,744
1980-81 . . . . .		531.7	105.5	57.0	718.5 1,932
1981-82 . . . . .		497.6	96.4	50.6	671.3 1,920
1982-83 . . . . .		487.3	85.0	54.2	657.8 1,878
1983-84 . . . . .		497.3	100.1	50.7	673.9 2,053
1984-85p . . . . .		552.4	115.5	55.4	751.1 2,541

(a) Includes processed wool.

For further details on sheep shorn, wool production and overseas trade see the following publications: *Livestock and Livestock Products, Australia* (7221.0), *Sheep Numbers, Shearing and Wool Production Forecast, Australia* (7211.0), *Shearing and Wool Production Forecast, Australia (Preliminary)* (7210.0), *Livestock Products Australia* (monthly) (7215.0), *Foreign Trade, Australia* (5409.0, 5410.0), *Production Bulletin No. 4: Australia* (8360.0) and *Value of Agricultural Commodities Produced, Australia* (7503.0).

#### Dairying

Dairying occurs in all States but is mainly concentrated in the south-eastern region of the mainland, and in Tasmania, where rainfall is ample and fairly reliable. It is predominantly coastal, but has also developed inland in small areas close to population centres and, on a larger scale, in some irrigated regions in the Riverina of New South Wales and northern Victoria.

Australian dairy cattle have shown steady improvement in quality, as demonstrated by milk yield, over the years. This is attributable to improved breeding associated with herd recording; the use of artificial insemination; better feeding resulting from the use of improved pastures and supplementary feed; better farming methods arising from the application of new

management practices and the use of the latest technology; and a contraction of the industry to climatically more favourable areas. Typical of the developments which have occurred are the almost total change from on-farm separation and delivery of cream to the collection of whole milk by milk tankers from on-farm refrigerated milk vats and the introduction of Herringbone and Rotary type dairies on farms.

The manufacturing and processing sections of the industry are well advanced technologically and certain techniques and equipment developed in Australia are being used overseas. State Agricultural Departments give advice on the most suitable methods of production and inspect animals, buildings and production, so that the latest advances in technology are passed on to the farmer and that hygiene standards are maintained at a high level.

**MILK CATTLE NUMBERS**

('000)

31 March	Bulls used or intended for service	Cows and heifers used or intended for production of milk or cream for sale			House cows and heifers (a)
		Cows (in milk and dry)	Heifers 1 year and over	Under 1 year	
1980 . . . . .	56	1,869	431	396	77
1981 . . . . .	54	1,819	460	393	74
1982 . . . . .	49	1,810	465	387	73
1983 . . . . .	47	1,792	460	390	69
1984 . . . . .	46	1,809	483	401	66
1985p. . . . .	46	1,817	477	415	65

(a) One year and over, kept for the establishment's own milk supply.

**The economic position of the industry**

Faced with a reduced demand on the domestic market and low prices on the export market, the industry contracted significantly during the seventies. Milk production fell from 7,249 ML in 1970-71 to 5,243 ML in 1980-81. The downturn in the world dairy trading environment was largely attributable to production policies adopted by the major producing and consuming countries, such as the EEC and USA which, coupled with protection of their domestic markets, resulted in world production of most dairy products in excess of profitable market opportunities.

During the first two years of the eighties, the industry temporarily prospered when domestic and export prices reached high levels. By 1983, however, the international dairy market again experienced strong downward price pressures, large stock levels and uncertainty. World market prices of major dairy products approached GATT minimum levels in 1984, and on 5 June 1985 the GATT minimum prices for butter, anhydrous milk fat and whole milk powder were reduced. Given the increase in domestic production in recent years, Australia has needed to sell a growing volume of exports on this depressed export market. As a result, the financial situation of dairy farmers, particularly those heavily reliant on returns from milk used for manufacturing purposes, has deteriorated significantly.

**Government assistance**

The downturn in the Australian dairy industry during the 1970s resulting largely from the low international prices for dairy products, led in 1976-77 to the introduction of new domestic marketing arrangements and a Government scheme to underwrite minimum prices for the major dairy products.

The voluntary equalisation arrangements which had operated in the dairy industry since 1923 were considered to be in danger of collapse because of the phasing out of a production bounty which had applied to butter and cheese.

Legislative backing for the levy/disbursement scheme became the basis for stabilisation/marketing arrangements. These were aimed at supporting the domestic price structure for prescribed dairy products and providing each manufacturer with an equalised return for domestic and export sales of such products. Prescribed dairy products include butter/butteroil, skim milk powder, whole milk powder, casein and certain types of cheese.

From 1976-77 to 1980-81 the Government underwrote minimum prices for prescribed products. These prices were set annually on the basis of a minimum return per kilogram butter-fat in manufacturing milk.

In June 1981, the Government announced the introduction of a new underwriting scheme for prescribed dairy products to apply for two years from 1 July 1981. Following a recommendation by the Industries Assistance Commission (IAC) this scheme was extended for a year, and subsequently, the Government agreed to continue this arrangement for the 1984-85 production year. The underwriting scheme was designed to protect the industry against unexpected and sharp falls in market returns without masking the underlying long term trends. While no Commonwealth contributions were required for the first two years of the scheme increasing domestic production and depressed export prices have led to significant Commonwealth outlays in respect of the 1983-84 and 1984-85 seasons. These are estimated at around \$11.8m for 1983-84 and \$6.7m for 1984-85.

The Government also assists by matching, on a dollar for dollar basis, expenditure of levy raised for the purpose of a program of research recommended by the Australian Dairy Research Committee.

Following a report by the IAC in November 1983, the Government conducted a comprehensive review of marketing and assistance arrangements for the dairy industry. State Governments and industry were closely involved with the review process, although the agreement of all parties to new arrangements was not reached. The Government subsequently announced in March 1985 a number of new marketing arrangements designed to be both more efficient and equitable. Under the new arrangements there is to be, inter alia, a reduction in Government regulation and a managed reduction in support levels over time. At the same time the industry would be encouraged to develop new products and markets. A proposal for a special dairy industry adjustment program was part of the of new arrangements.

Legislation to implement the new arrangements from 1 July 1985, was however, not passed by the Parliament. Consequently, the existing legislation continues to apply for the 1985-86 season. However, in taking decisions for 1985-86, account was taken, where possible, of the basic thrust of the rejected arrangements. In this context the Government implemented underwriting arrangements on an export returns, rather than a gross equalised returns, basis.

#### Adjustment

A Rural Adjustment Scheme (RAS) replaced the Rural Reconstruction Scheme on 1 January 1977 and incorporated most of the measures previously available under the Dairy Industry Adjustment Program. A new RAS Scheme was introduced from 1 July 1985. Adjustment in the industry has been continuing for many years with the number of dairy farms falling from around 38,000 in 1970 to around 18,500 in 1984.

#### PRODUCTION, UTILISATION AND GROSS VALUE OF WHOLE MILK

Year	Whole milk intake by factories (a)			
	Market milk sales by factories	Milk used in the manufacture of dairy products	Total intake	Gross value
	—million Litres—			(\$ million)
1979-80	1,511	3,887	5,398	676.0
1980-81	1,541	3,702	5,243	885.1
1981-82	1,552	3,716	5,268	1,033.9
1982-83	1,572	3,952	5,524	1,186.5
1983-84	1,572	4,351	5,923	1,153.2
1984-85p	1,593	4,446	6,039	1,082.2

(a) These milk intake figures have been collected (from milk factories) by the Australian Dairy Corporation and replace statistics of whole milk production and utilisation previously compiled by ABS.

#### Domestic Market

Over the decade to 1982-83 there had been a marked swing away from the production of butter and its by-products, skim milk powder and casein, to cheese and whole milk powder. This was accompanied by an increased percentage of total milk production going to the fluid milk (including flavoured milk) market and being used in the manufacture of short and shelf-life products such as yoghurt. However, the upsurge in production which began in 1983-84 and has continued to date, has almost totally been utilised in the production of bulk manufactured products for the export market.

Except for cheese, the domestic market is virtually entirely supplied from Australian produced dairy products. Cheese imports account for approximately 19 per cent of domestic cheese consumption.

**Exports**

Australia's export trade in dairy products has undergone considerable change in the last decade, in terms of both the volume and type of production exported and the direction of trade.

Between 1969-70 and 1980-81, there was a significant overall reduction in the volume of milk produced in Australia. Since 1980-81, however, milk output has increased significantly. In whole milk equivalent terms, total Australian exports of dairy products in 1984-85 accounted for approximately a quarter of total milk output.

The UK was Australia's major outlet for dairy products, particularly butter and cheese, until it joined the European Economic Community (EEC) in 1973. Australia's export markets are now more diversified and this has involved changes to the mix of products exported. Exports of butter, casein and, to a lesser extent, skim milk powder declined significantly between the early 1970s and the early 1980s. However since 1981-82, exports of these products have again expanded with the increasing quantity of milk available for manufacturing purposes.

Japan and South-East Asia are the principal markets for skim milk powder; USA and Japan for casein; USSR, South-East Asia and the Middle East for butter; South-East Asia for whole milk powder and the Middle East and Japan for cheese.

The international market is currently characterised by considerable uncertainty and depressed prices owing mainly to substantial surpluses of dairy products which have been accumulated in the EEC and USA. As a result, Australian exporters continue to encounter difficulties exporting product at remunerative prices.

**PRODUCTION AND TRADE OF BUTTER AND CHEESE**

Year	Butter		Cheese				Imports '000 tonnes
	Factory production	Exports(a)		Factory pro- duction(c)	Exports(b)		
		Quantity '000 tonnes	Value f.o.b. '000 \$m		Quantity '000 tonnes	Value f.o.b. '000 \$m	
1979-80	84.3	17.9	28.7	154.2	61.1	94.4	10.9
1980-81	79.4	12.0	23.1	136.7	54.1	103.7	13.3
1981-82	76.4	5.0	14.0	153.3	57.5	122.9	16.1
1982-83	88.3	15.5	41.1	158.2	54.5	134.6	19.7
1983-84	111.3	27.4	50.3	161.1	54.6	141.1	22.3
1984-85p	114.0	40.6	67.2	159.6	67.5	163.1	22.3

(a) Excludes ghee and butter concentrates. (b) Includes processed cheese exports. (c) Factory production is shown only for non-processed cheese.

**Apparent consumption**

**CONSUMPTION OF MILK, BUTTER, CHEESE AND MARGARINE**

Year	Apparent consumption Total			Apparent consumption Per capita per year			Margarine	
	Market milk	Butter	Cheese	Market milk	Butter	Cheese	Table	Other
							kg	kg
	ML	tonnes	tonnes	Litres	kg	kg	kg	kg
1979-80	1,510	66	96	103.4	4.6	6.6	6.4	2.4
1980-81	1,540	64	98	104.0	4.3	6.6	6.7	2.5
1981-82	1,552	65	105	103.1	4.3	7.0	6.8	2.7
1982-83	1,572	61	113	102.9	4.0	7.4	6.8	2.8
1983-84	1,572	60	118	102.9	3.9	7.7	6.9	2.7
1984-85p	1,606	62	127	103.3	4.0	8.1	6.7	2.4

For further details on the dairying industry see the publications, *Livestock and Livestock Products, Australia* (7221.0), and *Production Bulletin No. 3: Food, Drink and Tobacco, Australia* (8359.0).



### Beekeeping

The beekeeping industry consists of approximately 300-400 full-time apiarists, who produce approximately 70 per cent of Australian honey, and a large number of part-time apiarists who produce the rest. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to obtain a continuous supply of nectar for honey from suitable flora. While honey production remains the predominant sector of the industry, production of breeding stock and provision of pollination services is significant.

In March 1985 the Government announced its acceptance of the recommendation by the Industries Assistance Commission that no further assistance to the honey industry was warranted. The inquiry by the IAC was the result of a submission by the industry to Government seeking a price stabilisation/equalisation scheme for honey exports.

A major review of the size, role and functions of the Australian Honey Board is being conducted. To facilitate this review the Commonwealth Department of Primary Industry produced a discussion paper, which has been circulated widely to the industry, to assist the consideration of the various issues raised in such a review.

NOTE: Statistics in the following table relate to apiarists with forty or more hives.

#### BEEKEEPING STATISTICS

Year	Number of apiarists	Honey produced				Beeswax produced		
		Number of beehives		Average production per produc- tive hive	Gross value	Quantity	Gross value	
		Productive	Total					
		'000	'000	'000 tonnes	kg	\$'000	tonnes	\$'000
1978-79 . . . . .	2,201	369	501	18.3	49.5	14,111	349	1,213
1979-80 . . . . .	2,141	402	511	25.0	62.0	19,050	464	1,719
1980-81 . . . . .	2,224	379	531	19.5	51.5	15,815	366	1,530
1981-82 . . . . .	2,263	405	552	24.8	61.3	18,211	482	1,978
1982-83 . . . . .	2,182	390	540	22.5	57.7	16,605	424	1,613
1983-84p . . . . .	2,148	393	529	25.0	63.6	19,220	467	1,622

#### EXPORTS OF HONEY AND BEESWAX

Year	Honey		Beeswax	
	Quantity	Value f.o.b.	Quantity	Value f.o.b.
	'000 tonnes	\$'000	tonnes	\$'000
1979-80 . . . . .	11.4	11,572	218	917
1980-81 . . . . .	8.2	8,985	177	733
1981-82 . . . . .	12.8	10,596	303	1,216
1982-83 . . . . .	14.8	13,075	368	1,387
1983-84 . . . . .	11.0	11,152	256	963
1984-85p . . . . .	17.6	16,829	390	1,589

#### Honey levy

The *Honey Levy Acts (Nos. 1 & 2) 1962* impose a levy on domestic sales of honey. The rate of levy is set by regulation up to a maximum of 2.70c per kg provided by the legislation. From 1 October 1983 the levy was increased from 2.05c per kg to 2.45c per kg.

The *Honey Export Charge Act 1973*, imposes a charge on exports of honey. The current rate of charge, set by regulation, is 0.75c per kg. The legislation provides for a maximum charge of 1.5c per kg.

0.25c per kg of both the levy and charge is the industry contribution to research while the remainder is used to finance the operations of the Australian Honey Board. A proposal to increase the research components of the levies from 0.25c per kg to 0.35c per kg is currently before the Government.

#### Honey exports

Honey exports in 1984-85 were at a record level of 17,622 tonnes, compared to the 1982-83 record of 14,830 tonnes. While this continues to reflect the high cost of storing honey the devaluation of the Australian dollar was the main reason for the record exports.

For further information, see the publication *Livestock and Livestock Products, Australia* (7221.0).

## Eggs and egg products

Record commercial egg production in Australian States (incl. N.T. but excl. A.C.T.) in 1983-84 was 131.2 thousand tonnes (192.8 million dozen) compared with 131.6 in 1982-83. It is expected that falls will continue as all States endeavour to reach their goal of maintaining quota hen numbers at such levels as will result in production being very close to domestic needs with very little left over for export. Such action has been taken as the net return on exports of shell eggs and egg products has been well below the cost of production in past years. The industry adopted a five year plan to reduce the national surplus to a 3 per cent margin which should meet seasonal shortfalls and the relatively minor profitable sector of the export market by July 1987.

### EGGS AND EGG PRODUCTION: SUPPLY AND UTILISATION (Eggs in shell weight)

Year	Production				Apparent consumption in Australia as human food		
	Recorded commercial	Total (a)		Exports	Processed food(b)	Total	Per capita per year
		Quantity	Gross value				
	'000 tonnes	'000 tonnes	\$ million	'000 tonnes	'000 tonnes	'000 tonnes	
1978 79 . . . . .	126.7	196.9	196.9	17.0	20.5	180.6	12.6
1979 80 . . . . .	128.0	194.7	216.1	11.2	18.0	182.8	12.5
1980 81 . . . . .	134.0	203.4	227.4	18.9	23.2	184.2	12.4
1981 82 . . . . .	128.2	199.3	253.4	11.5	17.9	188.3	12.5
1982 83 . . . . .	131.6	204.4	275.3	9.8	18.6	191.2	12.5
1983 84 . . . . .	131.2	206.0	295.2	14.6	20.7	192.3	12.4

(a) Includes estimates for uncontrolled commercial production and production by self-suppliers. (b) Includes egg products as pulp and powder; also includes wastage.

### Exports

The Australian Egg Board, established by Commonwealth legislation in 1947, was responsible for co-ordinating export marketing arrangements. It was empowered to purchase surplus domestic supplies from State marketing authorities, if they so wished, and to arrange to sell such eggs or products on overseas markets.

Following reviews of the Board's operations, in the light of falling export quantities resulting from industry actions to reduce surplus production, the Commonwealth Government announced in August 1984 its decision to abolish the Australian Egg Board. Legislation was passed in both Houses of Parliament, late in 1984, to abolish the Board.

Any export marketing is now undertaken by the individual State Board concerned under the aegis of an Exporters Committee established by the Australian Egg Marketing Council (AEMC). The AEMC is a non-statutory body whose membership is made up of the members of the State Egg Marketing Boards.

Exports are predominantly in egg pulp form—white, yolk and whole egg. Export levels are expected to fall markedly in 1985-86, as all States (NSW in particular) cut back production to eliminate, wherever possible, the substantial losses being incurred by the industry with this trade.

### EXPORTS OF EGGS AND EGG PRODUCTS

Year	Eggs in shell		Eggs not in shell		Dry	
	Quantity	Value f.o.b.	Liquid form		Quantity	Value f.o.b.
			Quantity	Value f.o.b.		
	'000 doz	\$'000	tonnes	\$'000	tonnes	\$'000
1979-80 . . . . .	1,364	779	5,833	5,816	74	322
1980-81 . . . . .	1,423	1,113	8,508	8,891	50	337
1981-82 . . . . .	1,143	1,095	5,013	6,400	62	219
1982-83 . . . . .	2,672	1,763	3,455	4,108	85	682
1983-84 . . . . .	6,734	3,541	6,892	6,112	95	312
1984-85p . . . . .	1,938	1,821	3,696	4,463	203	1,058

## Agricultural improvements

### Fertilisers

Most Australian soils are deficient in phosphorus. Because of this and the significant but less widespread deficiency of sulphur in many soils, phosphatic fertilisers, particularly single superphosphate, account for the bulk of fertiliser usage. Nitrogen deficiency is also general

in Australian soils and the use of nitrogenous fertilisers is increasing. Potassium deficiency however is confined mainly to soils in the higher rainfall areas which are intensively cropped or used for irrigated pastures.

The pattern of fertiliser usage in Australia has changed dramatically in recent years. Prior to 1973-74 the usual consumption ratio of elemental N:P:K has been 2:6:1, but by 1983 the ratio had changed to almost 3:3:1. This variation has resulted from a combination of reduced consumption of phosphatic fertilisers with an increased consumption of nitrogenous fertilisers.

The domestic industry has sufficient manufacturing capacity to meet normal local demand for phosphatic fertilisers but not nitrogenous fertilisers. Australia is dependent on imports of potassic fertilisers, rock phosphate and sulphur. Imports of compounded high analysis fertilisers and specialised fertilisers were insignificant until 1982-83. Since then, however, imports have been rising strongly, largely as a result of oversupply and lower prices on the world market.

#### ARTIFICIAL FERTILISERS: AREA AND USAGE

Year	Area fertilised	Super-phosphate used	Nitrogenous fertilisers used	Other fertilisers used
	'000 ha	'000 tonnes	'000 tonnes	'000 tonnes
1978-79	25,403	2,651	485	398
1979-80	n.a.	2,969	365	620
1980-81	n.a.	2,947	392	609
1981-82	26,777	2,874	395	599
1982-83	n.a.	2,562	429	633
1983-84p	n.a.	2,482	415	721

Since the Second World War there has been a great expansion of the area of sown pasture accompanied by an increased use of fertilisers. New pasture varieties (including tropical species) have been developed, and nutrient or trace elements deficiencies in soils identified.

The main artificial fertiliser used in Australia is superphosphate, over half of which is used on pastures, mainly in areas with moderate to good rainfall. Large quantities are also used on cereal crops.

#### SUPERPHOSPHATE USAGE

<i>Selected crops and pastures</i>						
Year	Sown and native pastures	Lucerne	Wheat	Other cereals	Sugar cane	Total
AREA FERTILISED ('000 hectares)						
1978-79	12,079	379	8,004	4,220	266	25,403
1979-80	14,703	n.a.	8,607	n.a.	262	n.a.
1980-81	13,964	n.a.	8,723	n.a.	291	n.a.
1981-82	12,240	106	9,361	4,034	301	26,043
1982-83	10,711	n.a.	9,299	n.a.	300	n.a.
1983-84	10,175	n.a.	9,672	n.a.	292	n.a.
SUPERPHOSPHATE USED ('000 tonnes)						
1978-79	1,451	55	634	410	22	2,651
1979-80	1,820	n.a.	716	n.a.	26	2,969
1980-81	1,733	n.a.	756	n.a.	32	2,947
1981-82	1,518	21	801	416	31	2,874
1982-83	1,289	n.a.	777	n.a.	27	2,562
1983-84	1,229	n.a.	720	n.a.	23	2,482

PRODUCTION AND IMPORTS OF FERTILISERS

Item	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 <sup>p</sup>	
PRODUCTION							
Superphosphate (a) . . . . .	'000 tonnes	4,202	3,557	3,464	2,877	2,668	n.y.a.
Mixed chemical fertilisers (including complete manures) . . . . .	'000 tonnes	1,050	1,277	1,092	967	990	n.y.a.
Leaf and foliage type fertilisers (including dry and liquid form) . . . . .	tonnes	3,758	n.p.	7,765	6,846	n.p.	n.y.a.
Manures (without added chemical fertilisers) (b) . . . . .	tonnes	12,558	29,906	26,677	34,128	39,107	n.y.a.
IMPORTS							
Crude fertilisers (mainly natural phosphate) . . . . .	'000 tonnes	2,181	2,294	2,772	2,148	1,689	1,772
	Value \$m	80.4	102.1	128.6	109.1	86.3	89.5
Manufactured, mineral or chemical fertilisers—							
Nitrogenous (c) . . . . .	'000 tonnes	75	86	108	101	91	200
	Value \$m	9.4	12.7	16.2	15.6	14.8	41.8
Potassic (d) . . . . .	'000 tonnes	215	213	255	203	228	234
	Value \$m	15.5	21.5	26.7	20.7	23.1	28.6
Other (e) . . . . .	'000 tonnes	81	66	92	273	389	421
	Value \$m	7.2	14.8	19.1	53.1	87.8	110.4

(a) Includes double and triple superphosphate and ammonium phosphate in terms of single superphosphate. (b) Blood, bone and/or offal, and other material. (c) Mainly ammonium nitrate, ammonium sulphate, calcium ammonium nitrate, sodium nitrate and urea containing in the dry state more than 45 per cent by weight of nitrogen. (d) Mainly potassium chloride and potassium sulphate. (e) Includes phosphatic fertilisers and compounds of the main elements nitrogen, phosphorus and potassium (N.P.K. complete fertilisers).

Note: Production data are derived from the Annual Manufacturing Census and the recorded monthly production.

**Aerial agriculture**

Extensive use is made of aircraft for top-dressing and seeding, for spraying and dusting of crops and pastures, and for pest and vermin extermination. The statistics below have been compiled from returns collected from the operators of aircraft engaged in aerial agriculture. The collection, which was commenced in 1956, is now the responsibility of the Department of Aviation.

AERIAL AGRICULTURE

Year ended 31 March	Area treated ('000 hectares)			Materials applied ('000 tonnes)		Productive hours flown ('000 hours)
	Top dressed and seeded	Sprayed	Total(a)	Super-phosphate	Seed	
1979 . . . . .	3,212	2,956	6,224	374.5	5.9	101.2
1980 . . . . .	4,416	2,412	6,907	514.2	6.4	127.3
1981 . . . . .	2,727	2,054	4,850	489.5	4.6	98.7
1982 . . . . .	2,461	2,760	5,395	276.7	2.9	86.3
1983 . . . . .	1,643	1,638	3,448	193.7	3.2	62.5
1984 . . . . .	1,999	3,613	5,710	196.6	5.7	82.0
1985 . . . . .	1,732	3,505	5,679	168.9	5.4	77.5

(a) Includes other types of treatment (rabbit baiting, etc).

**Irrigation on agricultural establishments**

Irrigation is one of the factors by which agriculture is further developed. The variability in stream flow and annual rainfall means that successful irrigation of crops and pastures is dependent on storage. Ground water supplies are also used in areas where the quantity is adequate and the quality is suitable. The area of land irrigated (approximately 1.6 million hectares in 1983-84) forms about 9 per cent of the total area under crops and only 0.3 per cent of the total area of agricultural establishments.

Chapter 15, *Water Resources*, contains additional details of water conservation and irrigation with international, national and interstate aspects.

**CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, (a) AUSTRALIA 1983-84**  
(<sup>'000</sup> hectares)

<i>Crops and Pastures</i>	<i>Method</i>				<i>Total</i>
	<i>Sprays</i>	<i>Furrows and/or Flood</i>	<i>Trickle</i>	<i>Other and multiple methods</i>	
Pure Lucerne . . . . .	53.6	25.9	n.a.	2.6	82.2
Other pastures (sown or native). . . . .	119.2	643.5	n.a.	26.4	789.1
Cereals for all purposes . . . . .	51.7	251.6	n.a.	12.2	315.5
Vegetables for human consumption . . . . .	56.0	11.6	1.9	7.3	76.8
Total fruit . . . . .	33.9	33.6	25.8	4.7	98.0
All other crops . . . . .	77.0	171.2	1.4	13.8	263.3
<b>Total.</b> . . . . .	<b>391.5</b>	<b>1,137.3</b>	<b>29.1</b>	<b>67.0</b>	<b>1,624.9</b>

**SOURCE AND USAGE OF WATER FOR IRRIGATION, AUSTRALIA**

<i>Irrigation— area irrigated, by source 1983-84(c)</i>	<i>Estimated annual water use in 1977 (b)</i>				<i>Total</i>
	<i>Irrigation</i>	<i>Rural (excl irrigation)</i>	<i>Urban industrial</i>		
	<i>(<sup>'000</sup>)</i>	<i>percentage of total area irrigated %</i>	<i>—million cubic metres—</i>		
<i>Surface water—</i>					
State irrigation schemes . . . . .	914.2	56	} 11,554	742	2,493
Rivers, creeks, lakes . . . . .	367.9	23			
Farm dams . . . . .	107.3	7			
<i>Total surface water</i> . . . . .	<i>1,389.5</i>	<i>86</i>			<i>14,789</i>
<i>Town or country reticulated (d)</i> . . . . .	9.8	1			
Underground (ground water) . . . . .	225.6	14	1,639	337	480
<b>Total, all sources.</b> . . . .	<b>1,624.9</b>	<b>100</b>	<b>13,256</b>	<b>1,348</b>	<b>3,187</b>

(a) Collected every 3 years. (b) Estimated for an average climatic year; data source is the first *National Survey of Water Use in Australia*, Department of National Development and Energy and Australian Water Resources Council, Occasional Papers Series No. 1, AGPS, 1981. The data in the original are shown by drainage division and provide a sound basis for the efficient utilisation of existing resources and for the planning of future projects. (c) Data source is the annual Agricultural Census and represents area actually irrigated. Total area will therefore agree with that shown in the table on crops and pastures irrigated by method of irrigation. (d) This source represents irrigation water which has come from either surface or underground sources.

### **Agricultural machinery on agricultural establishments**

Statistics on the type of agricultural machinery on agricultural establishments were published in early issues of the Year Book. Additional information was published in the publication *Agricultural Land Use, Improvements and Labour, Australia, 1980-81* (7103.0). Details of the sales of new tractors for agricultural purposes are given in the quarterly publication *Sales and Stocks of New Tractors, Australia* (8507.0).

## **Employment in Agriculture**

### **Employment on agricultural establishments**

Prior to 1976 data on employment collected at the annual Agricultural Census differentiated between permanent full-time employees and temporary employees. Full-time workers excluded casual or seasonal workers and other persons working only part-time. Casual or seasonal workers were shown as temporary employees.

In the past it has been difficult to maintain comparability of employment on agricultural establishments from year to year because of the changing number of lessees and share farmers and because of the tendency of many farmers to include part-time family helpers as full-time workers in their returns. Since the Second World War there has been a decline in the percentage of people living in rural areas due, in part, to a rising standard of living accompanying the introduction of new techniques and increasing use of capital equipment, fuel, fertilisers, and pesticides. As a result, a smaller agricultural labour force is now producing a larger output of farm products.

**EMPLOYED PERSONS IN AGRICULTURE AND SERVICES TO AGRICULTURE  
(\*000)**

<i>Month of August</i>	<i>Males</i>	<i>Married females</i>	<i>All females</i>	<i>Persons</i>
1980 . . . . .	285.1	77.5	93.4	378.5
1981 . . . . .	281.9	87.1	104.6	386.5
1982 . . . . .	281.7	87.1	101.0	382.8
1983 . . . . .	290.2	80.2	94.1	384.2
1984 . . . . .	279.3	80.0	93.8	373.1
1985 . . . . .	287.4	89.5	107.1	394.5

*Source:* Monthly population survey conducted by the ABS throughout Australia. For further details see *The Labour Force, Australia* (6203.0).

### Regulation of Australian agricultural industries

Year Book No. 61, pages 837–57, contains a summary of the means by which agricultural industries are assisted and regulated. It is not intended as a comprehensive statement of all the consultative and legislative assistance and control measures that exist, but rather as a description of the way in which these processes affect the crops, livestock and livestock products referred to earlier in this chapter.

### Agricultural research by CSIRO

Agricultural research, conducted by the Commonwealth Scientific and Industrial Research Organization (CSIRO), is directed primarily to aspects of agricultural production which are of widespread significance and which require mid- to long-term research. It is aimed at establishing principles, practices and technologies that will improve the efficiency and long-term viability of Australian agriculture and its capacity to respond to changing needs. This work ranges from studies in basic biology to those designed to integrate new plant varieties, animal breeds and production technologies into sound production systems.

CSIRO's research is appropriate for attacking problems or developing opportunities that transcend State boundaries, are complex and require concentration of disciplinary effort for their solution, and may need sustained long-term effort before they yield practical results. CSIRO's agricultural research complements that of State Government departments and universities, and the Organization attaches considerable importance to collaborative research with them.

CSIRO's agricultural research makes up one-third of its overall research effort and covers the following research areas: plant improvement, plant physiology and biochemistry, soils and plant nutrition, crop and pasture pests and diseases, livestock production, livestock health, and agricultural systems. In addition, secondary industry research directly relevant to the agricultural industries covers the research areas of wool textiles, food handling, processing and storage, and agricultural and veterinary chemicals. There is also research directly relevant to the agricultural industries carried out within the research area of environmental protection and rehabilitation.

Most of CSIRO's agricultural research is carried out within the Institute of Animal and Food Sciences and the Institute of Biological Resources. The Institute of Animal and Food Sciences carries out scientific and technological research aimed at improving the efficiency of livestock production and the quality and safety of human foods. The Institute's activities include research on control of indigenous and exotic animal diseases; nutrition, reproduction, genetics and management of livestock; methods of processing, handling and storing meat, fish, dairy foods, fruit, vegetables and grain; and molecular and cellular biology and its application in the livestock and pharmaceutical industries. This research is performed by the following constituent units of the Institute—Divisions of Animal Health, Animal Production, Tropical Animal Science, Molecular Biology, Food Research, Australian National Animal Health Laboratory, and the Wheat Research Unit.

Research in the Institute of Biological Resources is directed to improvement of the productivity of Australia's rural industries and conservation of its biotic resources, recognising that the two are highly interdependent. Plants are sources of fibre and food, and the start of all human food chains. Research to optimise plant production is therefore of fundamental importance, and is directed to producing increased quantities of usable plant material of better quality and with least disruption to water resources, soils and fragile ecosystems. Work

to increase plant productivity is complemented by research to improve our understanding of the Australian environment. This research is performed by the following constituent units of the Institute—Divisions of Plant Industry, Tropical Crops and Pastures, Horticultural Research, Soils, Water and Land Resources, Wildlife and Rangelands Research, Entomology, and the Centre for Irrigation Research.

The Institute of Industrial Technology is also engaged in research of direct benefit to the agricultural industries. Wool textile and marketing research is performed by the Divisions of Protein Chemistry, Textile Physics, and Textile Industry, and research on the design and synthesis of potential agricultural chemicals is performed by the Division of Applied Organic Chemistry.

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# CHAPTER 14

## FORESTRY AND FISHERIES

### FORESTRY

#### Forestry in the States and Territories

In the Australian Federal framework, State Governments are primarily responsible for land management. Each State has a forest service responsible for the management and control of publicly-owned forests, in accordance with Forestry Acts and Regulations. Forest management aims to satisfy all reasonable demands by the community on the forest estate including timber production, provision of minor forest products, grazing, protection of native flora and fauna, recreation and watershed protection.

The Department of Territories is responsible for the management and control of forests in the Australian Capital Territory. Forestry in the Northern Territory is the responsibility of the Northern Territory Conservation Commission.

#### Commonwealth Forestry Administration

The Department of Primary Industry is responsible for forestry matters at the national level. Its primary responsibilities are the administration of a control on the export of unprocessed timber; liaison with State, national and international organisations concerned with forestry; and provision of the Secretariat for the Australian Forestry Council. Compilation of national statistics on the forest industries is undertaken by the Bureau of Agricultural Economics.

#### Existing Forest Estate

The total area of native forest, defined as land dominated by trees with an existing or potential mature height of twenty metres or more, including native stands of cypress pine in commercial use regardless of height, was estimated at 40.9 million hectares as at 30 June 1984. Thirty-five million hectares of the natural forests are dominated by eucalypts. For a more detailed examination of Australian native forests, see Yearbook No. 61, Chapter 24.

NATIVE FOREST AREAS CLASSIFIED BY FOREST TYPE, 30 JUNE 1984

('000 hectares)

Forest type group	N.S.W. (a)	Vic. (b)	Qld	S.A.	W.A. (b)	Tas. (b)	N.T.	A.C.T.	Aust.
Rainforest . . . . .	253	13	(c) 1,074	-	-	499	38	-	1,877
Eucalypt									
Productivity Class I (d) . . . . .	1,220	630	204	-	187	502	-	-	2,743
Class II (e) . . . . .	3,649	3,969	1,290	-	2,761	1,922	-	51	13,642
Class III (f) . . . . .	8,320	293	3,140	-	18	-	-	-	11,771
Tropical eucalypt and paperbark . . . . .	-	-	4,078	-	-	-	2,450	-	6,528
Cypress pine . . . . .	1,908	6	1,685	-	-	-	778	-	4,377
<b>Total . . . . .</b>	<b>15,350</b>	<b>4,911</b>	<b>11,471</b>	<b>-</b>	<b>2,966</b>	<b>2,923</b>	<b>3,266</b>	<b>51</b>	<b>40,938</b>

(a) Last revised 1972; rainforest areas revised 1981. (b) Revised. (c) Currently under revision. (d) Relatively high productivity. (e) Relatively low productivity. (f) Moderate productivity.

NATIVE FOREST AREAS CLASSIFIED BY OWNERSHIP, 30 JUNE 1984

('000 hectares)

Ownership category	N.S.W. (a)	Vic. (b)	Qld	S.A.	W.A. (c)	Tas. (c)	N.T. (c)	A.C.T. (c)	Aust.
State forestry (d) . . . . .	2,866	1,916	(e) 3,126	-	1,944	1,176	312	-	11,340
Other public (f) . . . . .	6,208	1,536	5,672	-	346	703	207	4	14,676
National parks (g) . . . . .	993	(h) 853	(e) 1,394	-	140	375	315	47	4,117
Private (i) . . . . .	5,283	606	1,279	-	536	669	2,432	-	10,805
<b>Total . . . . .</b>	<b>15,350</b>	<b>4,911</b>	<b>11,471</b>	<b>-</b>	<b>2,966</b>	<b>2,923</b>	<b>3,266</b>	<b>51</b>	<b>40,938</b>

(a) Last revised 1976. (b) As at 31 March 1980. (c) Revised. (d) Publicly owned land, permanently reserved or dedicated primarily for timber production. (e) Currently under revision. (f) Publicly owned land, vacant or occupied under lease, not specifically reserved for timber production, but on which control of timber rests with the Crown. (g) Publicly owned land, permanently reserved for purposes other than timber production. (h) Some wood production is allowed in some national parks in Victoria. (i) Privately owned land, and leasehold where the Crown has no control over timber rights.



### Plantations

Tree plantations of a few coniferous species now provide a large part of Australian-grown wood supplies. The large scale establishment of these plantations was commenced by State Forest Services early this century, and in the case of South Australia, last century, to overcome the shortage of native coniferous timber. In an eleven year period covered by the *Softwood Forestry Agreements Acts 1967, 1972 and 1976*, the Commonwealth provided financial assistance to the States in the order of \$55 million for an extended program of softwood plantation development. A further Act in 1978 provided funds for a five year period to 30 June 1982 for the maintenance of the area of plantations established previously with Commonwealth funds.

Privately owned plantations amount to almost one-third the area under State ownership. New plantations (including replanting) are currently being established at the rate of 33,000 hectares per annum. A detailed account of the history and development of coniferous plantations and of the characteristics of individual species is included in Yearbook No. 59, page 880. The following table shows total area of plantations in Australia classified by species.

PLANTATION AREAS(a), CLASSIFIED BY SPECIES, 31 MARCH 1984

(Hectares)

Species group	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Coniferous—									
<i>Pinus radiata</i> . . . . .	187,271	177,254	3,557	76,361	42,120	59,279	—	13,182	559,024
<i>Pinus elliottii</i> . . . . .	5,004	—	99,205	—	254	—	—	—	104,463
<i>Pinus pinaster</i> . . . . .	—	1,468	—	3,572	26,687	—	—	—	31,727
<i>Pinus caribaea</i> . . . . .	1,909	—	29,508	—	—	—	1,780	—	33,197
<i>Araucaria</i> . . . . .	1,551	—	43,749	—	—	—	1	—	45,301
Other coniferous . . . . .	6,119	2,855	5,706	389	259	374	2,545	758	19,005
<i>Total coniferous</i> . . . . .	201,854	181,577	181,725	80,322	69,320	59,653	4,326	13,940	792,717
Broadleaved—									
<i>Eucalyptus</i> . . . . .	6,618	13,430	2,788	1,193	8,698	8,345	2	—	41,074
<i>Populus</i> . . . . .	2,086	304	—	—	—	—	—	—	2,390
Other broadleaved . . . . .	—	102	501	—	—	1,212	1	—	1,816
<i>Total broadleaved</i> . . . . .	8,704	13,836	3,289	1,193	8,698	9,557	3	—	45,280
<b>Total</b> . . . . .	<b>210,558</b>	<b>195,413</b>	<b>185,014</b>	<b>81,515</b>	<b>78,018</b>	<b>69,210</b>	<b>4,329</b>	<b>13,940</b>	<b>837,997</b>

(a) Public and private ownership.

### Australian Forestry Council

In 1964, the Australian and State Governments formed the Australian Forestry Council to co-ordinate the development of the forest resource in the general interest of the community and to guide national programs for the production, utilisation and conservation of Australian forests. Membership of the council comprises the State and Northern Territory Ministers responsible for forestry and the Commonwealth Minister for Primary Industry. The council is serviced by a Standing Committee and specialist sub-committees.

### Research

#### *Commonwealth Scientific and Industrial Research Organization (CSIRO)*

The Division of Forest Research in the Institute of Biological Resources conducts research in the core areas of forest ecology, forest diseases, forest physiology, forest operation, fire behaviour and soils nutrition. The Division also conducts research into taxonomy, mathematical modelling and seed research. The Division maintains close liaison with relevant State authorities and, on occasion, collaborates with private companies. It operates two regional stations and three regional groups in the States.

Within the Institute of Biological Resources (Divisions of Plant Industry, Entomology, Soils, Water and Land Resources and Wildlife and Rangelands Research) and the Institute of Energy and Earth Resources (Division of Groundwater Research) research is undertaken on forestry problems relevant to the disciplines pursued in these Divisions.

Within the Institute of Industrial Technology, the Division of Chemical and Wood Technology carries out a wide range of investigations relating to the properties of wood, the processing and uses of wood and wood products. The research programs of the Division are directed towards developing ways whereby Australia's forest resources can be more effectively

utilised. The programs include processing of wood and timber, technology of fibre separation, wood and fibre properties, composite wood and paper products, assessment of cellulosic resources and conservation of wood-based materials. Technology for the production of high value chemicals from wood and other plant materials is also being investigated.

The Divisions provide assistance to individuals and industry, provide training and experience for overseas technologists and maintain co-operative aid projects with developing countries.

### *Education*

The Australian National University's Department of Forestry in Canberra and the Faculty of Agriculture and Forestry of the University of Melbourne offer undergraduate courses leading to a Bachelor of Science degree in Forestry. Most States provide for sub-professional forestry training.

Each year the Department of Primary Industry makes available awards for full-time postgraduate research, normally leading to the degree of Master and/or Ph. D at an Australian university. The Department also administers an award based upon a private bequest for postgraduate study at Oxford University.



Woodchopping remains one of the most popular attractions at Australia's rural and agricultural shows.

*Australian Information Service*

### Timber and timber products

The selected details shown below have been compiled from the annual census of manufacturing establishments. For further details see Chapter 17, Manufacturing and Internal Trade.

#### MANUFACTURING ESTABLISHMENTS<sup>(a)</sup>—SUMMARY OF OPERATIONS, 1983-84

1983 ASIC code(b)	Industry description	Establish- ments at 30 June	Persons employed (c)	Turnover	Value added	Fixed capital expenditure less disposals
		No.	No.	\$'000	\$'000	\$'000
2531	Log sawmilling . . . . .	635	10,700	617,800	362,200	10,900
2533	Veneers and manufactured boards of wood . . . . .	75	4,600	442,700	165,000	16,300
2537	Hardwood woodchips . . . . .	14	700	188,100	74,500	3,000

(a) All manufacturing establishments owned by multi-establishment enterprises and single establishment enterprises with four or more persons employed. (b) Australian Standard Industrial Classification. (c) Average over whole year includes working proprietors.

#### TIMBER AND SELECTED TIMBER PRODUCTS PRODUCED <sup>(a)</sup>

Item		1981-82	1982-83	1983-84p
Undressed sawn timber—				
Recovered from sawn logs—				
Australian grown—				
Broadleaved . . . . .	'000 cu m	2,152	1,788	1,829
Coniferous . . . . .	"	1,125	1,196	988
Total . . . . .	"	3,276	2,984	2,817
Woodchips (green weight)—				
Hardwood (board leaved) . . . . .	'000 tonnes	3,943	4,031	4,551
Plywood—				
Commercial—(surface measure) . . . . .	'000 sq m	4,181	4,239	6,550
(1 mm basis) . . . . .	"	39,109	37,750	48,119
Waterproof—(surface measure) . . . . .	"	4,076	1,829	1,784
(1 mm basis) . . . . .	"	47,980	18,938	19,646
Particle board (resin bonded) . . . . .	'000 cu m	707	572	673
Wood pulp—				
Chemical . . . . .	tonne	181,097	155,675	147,578
Mechanical . . . . .	"	487,498	470,207	445,776
Other . . . . .	"			
Paper—				
Newsprint . . . . .	tonne	303,563	365,802	365,363
Printings . . . . .	"	96,775	94,662	131,137
Wrapping (incl. kraft) . . . . .	"	372,457	302,372	352,230
Writing and duplicating (b) . . . . .	"	101,669	84,326	91,572
Other paper (incl. blotting) . . . . .	"	25,001	38,456	32,246
Tissue and sanitary papers . . . . .	"	110,570	114,249	114,340
Paperboard (incl. strawboard) . . . . .	"	486,627	429,336	450,525

(a) Excludes production of small single establishment enterprises with less than four persons employed and establishments engaged in non-manufacturing activities but which may carry on, in a minor way, some manufacturing. (b) Includes cartridge.

#### Woodchips

The woodchip industry entails the procurement of wood and its mechanical reduction to chips about the size of an Australian 50 cent piece. These chips are either exported for pulping or retained for use in domestic pulping operations.

#### Timber and timber products

The major industries based on logging are sawmilling and the manufacture of ply, veneer, reconstituted board (particleboard, fibreboard), pulp and paper. The sawmilling industry is the largest single user of logs harvested from Australian forests (51 per cent), followed by the pulp and paper industry (45 per cent). Currently about 66 per cent of total volume of logs harvested are obtained from natural forests and the remainder mainly from coniferous plantations. This proportion will change over time so that towards the end of this century about half the supply of logs may be from coniferous plantations. Total removals at that time are estimated at 23 million cubic metres compared to current log removal of 15 million cubic metres.

The value of imports of forest products in 1983-84 was in the order of \$1,302 million while the value of exports of timber products was \$268 million of which \$191 million was for woodchips.

The following table shows the production, imports, exports and domestic consumption of sawn timber and major timber products.

#### SAWN TIMBER AND MAJOR TIMBER PRODUCTS 1983-84

(Source: Forestry Economic Research Section, Bureau of Agricultural Economics and Australian Bureau of Statistics)

Item		Production (1)	Imports (2)	Exports (3)	Domestic Consumption (1 + 2 - 3)
Sawn timber . . . . .	cu m	2,850,594	1,067,925	28,648	3,889,871
Plywood . . . . .	cu m	82,448	70,315	101	152,662
Railway sleepers . . . . .	cu m	174,388	—	10,895	163,493
Particleboard . . . . .	cu m	645,403	2,743	7,193	640,953
Hardboard . . . . .	cu m	90,324	2,193	4,942	87,575
Newsprint . . . . .	tonne	378,091	193,520	3,748	567,863
Printing and writing . . . . .	tonne	222,014	200,393	15,711	406,696
Other paper . . . . .	tonne	480,603	195,921	32,553	643,971
Paperboard . . . . .	tonne	439,768	43,342	5,384	477,726

In addition to the products listed above, exports for 1983-84 of pulpwood (virtually all in the form of woodchips) was 4,443,090 tonnes (green).

## FISHERIES

### Collection and presentation of fisheries statistics

#### Source and basis of statistics

Statistics presented in this section are obtained from the collections of State Fisheries Authorities. In all States except Queensland and Tasmania, the information is derived from returns collected from licensed fishermen. In Queensland the statistics have, to date, been based mainly on Fish Board receipts, but a new collection from fishermen, fish wholesalers and processors is now being developed. Tasmanian data are obtained from buyers and processors. Additionally, details of New South Wales tuna production are supplied by the CSIRO and particulars of Australian pearl culture have been collected and supplied by the Australian Fisheries Service, Department of Primary Industry.

Australian fisheries production statistics are generally in terms of the form in which the products are taken from the water. For example, the statistics of fish production published in this chapter are in terms of 'estimated live weights' which are calculated from landed weights by using conversion factors for each species in each State. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on an 'estimated live weight' basis and molluscs (edible) on a 'gross (in-shell) weight' basis. The figures for pearl shell and trochus shell refer to the actual quantities of dry shell for sale and exclude the weight of the fish.

For more details of employment and boats and equipment for general fisheries and particulars of the whaling industry see earlier issues of this publication.

### Fisheries resources and their commercial exploitation

#### Fish

Over 3,000 species of marine and freshwater fish occur in and around Australia. Australian fishermen concentrate their efforts on estuarine, coastal, pelagic (surface and mid-water swimming) and demersal (bottom living) fish that occur off the north-east, south-east and south-west coasts. Off north Australia, barramundi (*Lates calcarifer*) constitutes the most important estuarine and coastal species, while in the south-east and south-west regions, mullet (mainly *Mugil cephalus*), bream (*Acanthopagrus* spp.), Australian salmon (*Arripus trutta*) and Australian herring (*Arripus georgianus*) are important catch components.

Major pelagic fisheries are Spanish mackerel (*Scomberomorus commersoni*) off north Australia, and southern bluefin tuna (*Thunnus maccoyii*), snoek (*Leionura atun*), pilchards (*Sardinops neopilchardus*) and anchovies (*Engraulis australis*) off south-east Australia. Southern bluefin tuna are also fished off south-west Australia. Significant stocks of jack mackerel off southern Australia are as yet lightly fished.

A large multispecies demersal fishery that targets on flathead (*Neoplatycephalus* and *Platycephalus* spp.), morwong (*Nemadactylus* spp.), redfish (*Centroberyx affinis*), gemfish (*Rexea solandri*) and blue grenadier (*Macruronus novaezelandiae*), exists off south-east Australia. Demersal inshore snapper (*Chrysophrys auratus*) fisheries exist off south-west and south-east Australia; in the latter region, stocks of whiting (*Sillaginidae*) are also fished. In the northern tropical region, reef fish such as cods (*Epinephelus* spp.) are exploited. A large demersal fishery for school and gummy sharks (*Galeorhinus australis* and *Mustelus antarcticus*, respectively) is centred in Bass Strait.

Establishment of the 200 nautical mile Australian Fishing Zone (AFZ), brought portions of oceanic tuna stocks, and demersal and pelagic fish stocks previously exploited by foreign fishing vessels, under Australian control. Foreign fishing operations in the pelagic gill-net fishery off the north coast catch sharks (mainly *Carcharhinus* spp.), tuna (*Thunnus tonggol*) and Spanish mackerel; while in the demersal pair trawl fishery off the north-west coast, a tropical multispecies fauna, that includes threadfin bream (*Nemipteridae*), tropical snappers (*Lutjanidae*), emperors (*Lethrinidae*), goatfish (*Mullidae*) and hair tails (*Trichiuridae*) is taken.

### Crustaceans

Prawns (*Penaeus* and *Metapenaeus* spp.) provide the most valuable fishery in Australia and are taken in estuarine, coastal and offshore waters of all States except Tasmania. The western and southern rock lobsters (*Panulirus longipes cygnus* and *Jasus novaehollandiae*), also a valuable resource, are taken on rocky reefs around the southern half of Australia. Bay lobsters (*Thenus* spp. and *Ibacus* spp.) are taken incidentally to prawn trawling operations. Crabs (*Scylla* spp. and *Portunus* spp.) are taken mainly in Queensland. New South Wales and Western Australia.

### Molluscs (edible)

Naturally-occurring oysters are harvested in all States; in New South Wales and Queensland the Sydney rock oyster (*Crassostrea commercialis*) is cultured commercially. The introduction of the Pacific oyster (*Crassostrea gigas*) to Tasmania and South Australia has provided a limited supply in those States. Following a serious decline in catches in the scallop (*Pecten meridionalis*) fishery based on stocks in Port Phillip Bay, Victoria, new offshore beds were located in southern New South Wales, eastern Victoria, northern Tasmania and south-western Western Australia. However, substantial fluctuations in abundance have resulted in erratic production from year to year. A fishery based on the saucer scallop (*Amusium balloti*) is located off south and central Queensland and there is a small fishery for the same species in Shark Bay, Western Australia. An important abalone (*Halotus* spp.) fishery has been developed since 1964 in south-east Australia with Tasmania, Victoria and South Australia providing the bulk of the catch. There is also a small abalone fishery in south-west Australia. Mussels (*Mytilus planulatus*) are harvested in Victoria, Western Australia and New South Wales. Prior to 1978 small quantities of cephalopods, mainly squid, were produced in many localities. Feasibility fishing located promising squid resources (*Nototodarus gouldi*) in the south-east. Squid (*Loligo* spp.) form an important component to the trawl catch in the Arafura Sea.

### Pearl shell and trochus shell

The shell of the Australian species of pearl oyster (*Pinctada maxima*) is taken from various localities in the tropical waters of Australia, between Broome in Western Australia and Cairns in Queensland, for the manufacture of buttons, knife handles, etc. Live pearl shell is used for pearl culture, *Pinctada maxima* being capable of producing pearls which are the largest in the world and which command top market prices. Trochus shell is found mainly on coral reefs off the Queensland coast, although small quantities occur in Western Australia.

### Whales

Whales are now a protected species in the Australian Fishing Zone.

### Fisheries administration and research

The Commonwealth Parliament has enacted a number of laws dealing with fisheries in Australian waters beyond territorial limits. The fisheries laws of the States and the Northern Territory apply to all kinds of fishing within the territorial sea and in inland waters. These laws require the licensing of persons and boats in the commercial fisheries and provide a range of other regulatory powers. The Commonwealth Government laws relating to fishing are the *Fisheries Act 1952*, the *Continental Shelf (Living Natural Resources) Act 1968*, the *Foreign Fishing Boats Levy Act 1981*, the *Fisheries Agreements (Payments) Act 1981*, the *Fisheries Levy Act 1984* and the *Torres Strait Fisheries Act 1984*.

#### *Fisheries Act 1952*

This Act applies to commercial fishing for swimming species, by Australians in waters extending from 3 to 200 nautical miles seaward of the territorial sea baseline of Australia and the external territories excluding the territorial sea of another country, and by foreign boats in the 200 nautical miles Australian Fishing Zone. The Australian Fishing Zone comprises waters which extend 200 nautical miles seaward of Australia's territorial sea baselines but does not include territorial seas within the accepted fishing zones of adjacent countries or waters adjacent to Australia's Antarctic Territory.

#### *Continental Shelf (Living Natural Resources) Act 1968*

This Act regulates the searching for and taking, from the continental shelf of Australia and the external territories, of living sedentary species by Australians and foreigners. Sedentary species are those that, at the harvestable stage, are either immobile on or beneath the seabed or are unable to move except in constant physical contact with the seabed. The continental shelf is the seabed beyond the territorial sea and adjacent to permanently exposed land masses, extending to a depth of 200 metres or, beyond that depth, to where the exploitation of the seabed is possible.

#### *Torres Strait Fisheries Act 1984*

This Act gives effect in Australian law to the fisheries elements of the Torres Strait Treaty. The Act applies in the area of Australian jurisdiction in the Torres Strait Protected Zone and areas outside but near that zone proclaimed in respect of particular fisheries which Australia and Papua New Guinea have agreed to manage jointly under the Treaty, or which are referred to in the Treaty.

These three Acts require the holding of licences and empower the Minister to prohibit fishing activities as necessary for the conservation of resources and the management of the fisheries. The *Fisheries Act 1952* authorises the publication of management plans having the force of law in relation to particular fisheries.

#### *Foreign Fishing Boats Levy Act 1981; Fisheries Agreements (Payments) Act 1981*

These Acts facilitate the imposition and collection of access fees for foreign boats fishing in the Australian Fishing Zone.

#### *Fisheries Levy Act 1984*

This Act imposes a levy on prescribed classes of licences under the *Fisheries Act 1952* or the *Torres Strait Fisheries Act 1984* or on units of fishing capacity created by management plans under the first of those Acts.

### Administration

Australian fisheries are administered by the authority having jurisdiction over the waters concerned. In inland waters and in waters within territorial limits, administration is the responsibility of the State or Territory fisheries authority. In proclaimed waters, and on the continental shelf beyond territorial limits, administration is the responsibility of the Commonwealth Government, which by agreement, has delegated to State Fisheries Authorities the necessary authorities for day-to-day administration of the Acts.

The Commonwealth and all State Parliaments, as well as the Northern Territory House of Assembly, have enacted amendments to fishery laws for the purpose of implementing the fisheries elements of the offshore constitutional settlement adopted by the Premiers' Conference in 1979. Those amendments, which came into force on 14 February 1983, authorise the Commonwealth and one or more States to enter into a formal legal arrangement to apply a

single law (Commonwealth or State) to the management of a particular fishery from low water mark and to vest executive power under that law in:

- (i) a joint authority, the membership of which would comprise the Commonwealth and the relevant State or States;
- (ii) a State alone; or
- (iii) the Commonwealth alone.

The administration of the fisheries is directed to a number of objectives. The two most important are conservation and management of the living resources of the Australian Fishing Zone to ensure that they are not endangered by over exploitation; and achievement of the optimum utilisation of the living resources by the Australian fishing industry and foreign interests. Consistent with these objectives a number of controls have been introduced to prevent the depletion of the more heavily fished species and to ensure the optimum utilisation of resources. These controls take the form of individual transferable catch quotas, seasonal and area closures, gear limitations, minimum size requirements and limited access rights, as well as outright prohibitions on the taking of certain species.

The Fisheries Development Trust Account (established under the *Fishing Industry Act 1956*) and the Fishing Industry Research Trust Account (established under the *Fishing Industry Research Act 1969*) are available to support, financially, projects for the development and management of the fisheries and fishing industry which are consistent with the purposes of those Acts. The former was established with the proceeds of the sale of the assets of the Australian Whaling Commission and is replenished from Consolidated Revenue as necessary. The latter is a matching fund into which is paid each year an appropriation from Commonwealth Government Revenue equal to amounts collected from the fishing industry by the State Fisheries Authorities and paid into appropriate State research accounts for the same purpose.

### Research

The main aim of fisheries research in Australia is to provide a background of biological, technical and economic information which will provide guidance for the efficient and rational utilisation of fisheries resources. To this end much of the research already undertaken has been directed at formulating recommendations for management of various fisheries. Research work, including feasibility fishing projects involving foreign fishing vessels, is also carried out and is expected to lead to the development of new fisheries, the expansion of under-exploited fisheries, greater economy in operations and the use of more efficient equipment and methods.

Organisations in Australia at present engaged in research into fisheries matters are:

- (i) CSIRO Division of Fisheries Research, which has its headquarters and main laboratory at Hobart, Tas., and regional laboratories in Western Australia and Queensland (fisheries science);
- (ii) CSIRO Division of Oceanography, which has its headquarters and laboratory at Hobart, Tas.;
- (iii) CSIRO Division of Food Research, conducts research into handling, storage, processing and transportation of fish at its laboratory in Hobart, Tasmania;
- (iv) State fisheries departments (fisheries laboratories have been established in Sydney, Melbourne, Brisbane, Perth, Hobart, Darwin and Cairns); research vessels are operated by New South Wales, Victoria, Queensland, Western Australia, South Australia and Tasmania;
- (v) Australian Fisheries Service, Department of Primary Industry, Canberra (economic and management research, fishing technology, extension and education service);
- (vi) Bureau of Agricultural Economics, Canberra (economic and marketing research); and
- (vii) private fishing companies (surveys of fisheries resources, research into handling, processing and marketing).

### Boats and equipment used in fisheries

#### Fish, crustaceans and molluscs (edible)

The boats used for the estuarine fisheries are mostly small vessels propelled by diesel or petrol engines of low power. The offshore vessels range up to 40 metres in length and are almost invariably powered by diesel engines. Most of them have either insulated holds and carry ice, or are equipped with dry or brine refrigeration. Some rock lobster vessels are fitted with wells in which the catch is kept alive.

The following are the types of equipment most commonly used in the main fisheries: *mullet*, beach seine, gill-net; *shark* (edible), long-lines, gill-net; *Australian salmon*, beach seine; *snoek*, trolling lines; *flathead*, Danish seine, otter trawl; *snapper*, long-lines, traps, gill-net, handline; *morwong*, Danish seine, otter trawl, traps; *whiting*, handline, otter trawl, Danish seine, beach seine, gill-net; *garfish*, beach seine; *Spanish mackerel*, trolling lines; *tuna*, pole and live-bait, purse seine, trolling lines (lampara nets and purse seines are used for taking live bait for tuna); *prawns*, otter trawl, beam trawl, beach seine net; *rock lobster*, pots, traps; *scallops*, dredge, otter trawl; *abalone*, diving using hookah gear; and *pilchards*, *anchovies*, *jack mackerel* and *stripped tuna*, purse seine.

#### Pearls, pearl shell and trochus shell

Ketch-rigged luggers about 15 metres long which carry crews of eight to fourteen members are used for pearl shell fishing in northern Australia.

### Production, processing and domestic marketing of fisheries products

#### Value of fisheries production

The following table shows the gross value of fishing by States. As the value of materials used in the course of production is not available for all States, it is not possible to show a comparison of net values. Gross value of production is the value placed on recorded production at the wholesale price realised in the principal markets. In general, the 'principal markets' are the metropolitan markets in each State, although, in cases where commodities are consumed locally or where they become raw material for a secondary industry, these points are presumed to be the principal markets. Gross value includes marketing costs which were estimated at \$18.8 million for Australia for the year 1979-80. Details on marketing costs are not available for 1980-81 and subsequent years.

Australian totals are not available beyond 1980-81, due to estimates for Queensland not being available.

FISHERIES: GROSS VALUE OF PRODUCTION  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
GROSS VALUE								
1977-78	39,665	17,997	(a)40,808	(b)23,615	88,340	12,609	10,337	(c)233,351
1978-79	42,698	20,025	58,214	(b)29,924	80,233	14,636	19,576	(c)(d)279,258
1979-80	58,661	27,696	(e)62,789	(b)35,438	85,652	20,463	16,806	(c)(d)325,632
1980-81	73,048	33,440	(e)(f)86,292	(b)46,606	82,764	26,514	19,518	(c)(d)386,533
1981-82	74,983	30,525	n.a.	52,062	99,254	32,896	18,392	n.a.
1982-83	73,896	31,022	n.a.	61,234	126,208	31,140	19,286	n.a.
1983-84	73,235	34,060	n.a.	58,863	141,425	39,133	20,659	n.a.

(a) Incomplete: excludes oysters and rock lobster. (b) Incomplete: excludes octopus, cuttlefish, oysters and scallops. (c) Incomplete: see individual States. (d) Includes value of pearling which has been excluded from State totals. (e) Incomplete: excludes rock lobster. (f) Incomplete: excludes shark.

#### Production of selected fisheries

SELECTED FISHERIES PRODUCTS: PRODUCTION AND GROSS VALUE  
1983-84

Product	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
QUANTITY (tonnes)(a)								
Fish	22,414	14,465	n.a.	16,800	17,667	1,390	1,564	n.a.
Crustaceans	3,492	637	n.a.	5,330	14,204	1,807	2,548	n.a.
Molluscs (edible)	8,477	17,258	n.a.	1,863	4,235	14,158	112	n.a.
GROSS VALUE (\$'000)								
Fish	28,079	12,886	n.a.	18,980	13,412	2,742	2,584	n.a.
Crustaceans	21,810	4,381	n.a.	34,742	118,676	12,859	17,896	n.a.
Molluscs (edible)	23,345	16,793	n.a.	5,142	9,337	23,532	179	n.a.

(a) Estimated live weight.



**Pearls, pearl shell and trochus shell****PEARL CULTURE AND PEARL AND TROCHUS SHELL FISHING OPERATIONS(a)**

(Source: Department of Primary Industry)

		1981	1982	1983
<b>QUANTITY</b>				
Pearl and Trochus shell fishing operations—				
Production of—				
Pearl shell(b)	tonne	143.0	135.0	77.0
Trochus shell	tonne	n.p.	n.p.	n.p.
Pearl culture operations—				
Live shell introduced	No.	435,184	350,968	393,586
	tonne	174.0	192.0	171.2
Production—				
Round and baroque pearls	No.	68,422	67,075	111,035
	momme(c)	50,912	49,305	74,532
Half pearls	No.	134,414	191,357	166,754
Manufacturing shell	tonne	56.0	42.0	41.9
<b>VALUE (\$'000)</b>				
Pearl and Trochus shell fishing operations—				
Production of—				
Live pearl shell		1,513	2,783	2,478
Pearl shell		301	489	229
Trochus shell		n.p.	n.p.	n.p.
Pearl culture operations—				
Production of—				
Round and baroque pearls		15,404	10,555	12,333
Half pearls		914	1,332	1,090
Manufacturing shell		115	91	58

(a) Figures refer to the year ended January for the Northern Territory and Queensland and to the year ended December for Western Australia. (b) Excludes manufacturing shell produced from pearl culture operations. (c) A momme is a pearl weight measurement equivalent to 3.769 grams.

**Processing of fish, crustaceans and molluscs**

Processing plants are located strategically throughout Australia close to fishing grounds. A number of shore-based plants have been established in northern Australia to service the northern prawn fishery.

Rock lobsters, prawns, abalone, tuna, scallops and some fin fish are frozen for export; tuna, snoek, Australian salmon and abalone are canned; small amounts of fish are smoked; and some molluscs are bottled. Hand labour is still used extensively in processing operations, but mechanisation is being progressively introduced.

Ice is used extensively for the chilling of fish taken in estuarine and inshore fisheries. Refrigeration is used particularly on vessels operating in the tuna fishery and prawn fisheries to chill or freeze the catch. An increasing range of fish products, including fresh-chilled tuna, live rock lobster, abalone and sea urchin roe, are being air-freighted to export markets, particularly Japan.

Fish, crustaceans and molluscs intended for export are processed in establishments registered under the Export (Fish) Regulations. Edible fish for local consumption is mainly dispatched fresh-chilled to markets.

**Domestic marketing of fisheries' products**

Although a substantial proportion of the tuna and Australian salmon catches are canned, the greater part of Australian fish production is marketed fresh-chilled.

Marketing arrangements for fresh fish vary. In New South Wales, fish marketing is the responsibility of the Fish Marketing Authority which operates the Metropolitan Fish Markets. In other coastal centres of New South Wales, fishermen's co-operatives may become registered as local fish markets. In Queensland until recently the Fish Board sold all production on behalf of fishermen in that State, except fish intended for export and interstate trade. However, new legislation was passed in March 1982 giving fishermen a choice of selling their catch either through the Fish Board, Fishermens' co-operatives or licensed private processors and wholesalers. In Victoria, Western Australia, South Australia and Tasmania, there is no restriction on market outlets. In Victoria, Western Australia and South Australia, most fish

is sent to metropolitan wholesale fish markets for auctioning; small quantities are processed for sale locally, chiefly by co-operatives. Nearly all fresh fish in Tasmania is consigned direct to processors. The principal outlets for fish products in Australia are retail and catering establishments.

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Occasional Paper No. 89: Australia-New Zealand Trade in Fish

Australian Forest Resources

Timber Supply Review

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## IN RETROSPECT.....Year Book No 19 (1926)

1. Evolution of Scientific Forestry.—(i) In Other Lands. (a) General. It was by slow degrees only that the countries of the old world developed their forestry systems. Originally tribal common lands for feeding pigs, and hunting country open to all, the forests gradually became preserves of royal houses or of the aristocracy, the people generally being granted merely the right of pasturage. Step by step, as the value of the forests became better known, their use for the production of timber was emphasized, and usages, servitudes, and rights of entry which were opposed to the forestry interests were extinguished. Forestry is the scientific management of forests with a view to the highest sustained yield of timber and various other products.

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## CHAPTER 15

### WATER RESOURCES

This chapter is divided into two major parts:—existing water resources in Australia and the management of these resources. The former provides information on such topics as the geographic background to water resources, surface and groundwater supplies and use, and the drainage divisions in Australia. The latter summarises Australian and State assessment and management of water resources.

For information concerning general, descriptive and historical matter see Year Book No. 37, pages 1096–1141 and Year Book No. 51, pages 228–31.

An article on droughts in Australia appeared in Year Book No. 54, pages 991–6.

#### Introduction

Rainfall, or the lack of it, is the most important single factor determining land use and rural production in Australia. The chapter Climate and Physical Geography of Australia contains details on geographical and climatic features that determine the Australian water pattern. The scarcity of both surface and groundwater resources together with the low rates of precipitation, which restrict agriculture (quite apart from economic factors), has led to extensive programs to regulate supplies by construction of dams, reservoirs, large tanks and other storages.

#### Geographic background

*General.* Water resources are determined by rainfall, evaporation and physical features including soil, vegetation and geology. Chapter 2, Climate and Physical Geography of Australia, contains a detailed description of the climatic features of the country. A brief description of the landforms appears in Year Book No. 61, pages 25–27. In assessing Australia's water resources, dependability and quality of supply must be considered, as well as quantity.

*Topography.* The major topographical feature affecting the rainfall and drainage patterns in Australia is the absence of high mountain barriers. Australia's topographical features range from sloping tablelands and uplands along the east coast Main Divide through the low plain and marked depression in the interior to the Great Western Plateau.

*Drainage.* Only one-third of the Australian land mass drains directly to the ocean, mainly on the coastal side of the Main Divide and inland with the Murray-Darling system. With the exception of the latter, most rivers draining to the ocean are comparatively short but account for the majority of the country's average annual discharge.

The interior lowlands exhibit endoreic drainage patterns and surface drainage is totally absent from some arid areas of low relief.

*Climate.* Australia's large area (7.7 million square kilometres) and latitudinal range (3,700 kilometres) have resulted in climatic conditions ranging from alpine to tropical. Two-thirds of the continent is arid or semi-arid, although good rainfalls (over 800 mm annually) occur in the northern monsoonal belt under the influence of the Australian-Asian monsoon and along the eastern and southern highland regions under the influence of the great atmospheric depressions of the Southern Ocean. The effectiveness of the rainfall is greatly reduced by marked alternation of wet and dry seasons, unreliability from year to year, high temperatures and high potential evaporation.

*Settlement.* The availability of water resources controls, to a large degree, the possibility and density of settlement; these, in turn, influence the quality of the water through production and disposal of waste. Most early settlements were established on the basis of reliable surface water supplies and, as a result, Australia's population is concentrated along the coast, mainly in the comparatively fertile, well-watered east, south-east and far south-west.

As settlement spread into the dry inland grazing country, the value of reliable supplies of underground water was realised. Observations of the disappearance of large quantities of the rainfall precipitated on the coastal ranges of eastern Australia eventually led to the discovery of the Great Artesian Basin which has become a major asset to the pastoral industry.

Development, however, has not been without costs. Significant environmental degradation and deterioration in water quality are becoming evident.

For further information on the influence of water resources on the spread of settlement in Australia see Year Book No. 61, page 860.

### Surface supplies

*Distribution and volume.* As described above, permanent rivers and streams flow in only a small part of the continent. The average annual discharge of Australian rivers has been recently assessed at  $440 \times 10^9$  cubic metres, of which  $118 \times 10^9$  cubic metres is now estimated to be exploitable for use on a sustained yield basis. This is small in comparison with river flows on other continents. In addition, there is a pronounced concentration of runoff in the summer months in northern Australia while the southern part of the continent has a distinct, if somewhat less marked, winter maximum.

*Variability of flow.* Even in areas of high rainfall, large variability in flow means that, for local regional development, most streams must be regulated by surface storage. However, in many areas evaporation is so great that storage costs are high in terms of yield. Extreme floods also add greatly to the cost of water storage, because of the need for adequate spillway capacity.

*Potential development.* Some 84 per cent of all water used in Australia is surface water. This quantity is about  $15 \times 10^9$  cubic metres a year and represents about 13 per cent of the possible usable surface water available in Australia; it does not include the amount diverted for hydro-electric power generation and other instream purposes which does not affect the quantity of water available. However, the great variability of river discharge, high evaporation, lack of sites for storage on many catchments, and economic considerations limit potential development. There is, however, considerable scope for greater efficiency in water use.

### Groundwater supplies

About 80% of Australia is significantly dependent on groundwater supplies. Australia's estimated sustainable groundwater yield is  $72 \times 10^9$  cubic metres, and annual groundwater usage is estimated at about  $2.5 \times 10^9$  cubic metres.

Groundwater is divided according to its occurrence in the three main classes of aquifer:

(i) *Shallow unconsolidated sediments* comprise alluvial sediments in river valleys, deltas and basins; aeolian (windblown) sediments which generally occur in coastal areas; and lacustrine (lake) sediments. These sediments are often highly permeable and porous. Permeability and porosity may vary markedly according to orientation. Unconsolidated aquifers of this group generally occur at depths of less than 150 m and are often readily accessible to sources of water for recharge. Marked seasonal variations in water level are common.

(ii) *Sedimentary rocks* are generally made up of consolidated sediments. The aquifers owe their porosity to small voids between the grains which are often well compacted and cemented. They often cover significant areas, being continuous and of appreciable thickness. Rock strata usually dip quite gently. Nevertheless, over the full extent of the larger sedimentary basins, aquifers may reach great depths. Areas where recharge takes place may be small in relation to the extent of the aquifers. Water quality in individual aquifers may be quite good and fairly uniform over large areas. Some sediments contain a number of permeable and impermeable layers, creating a vertical sequence of separate aquifers, and water quality may vary greatly between them.

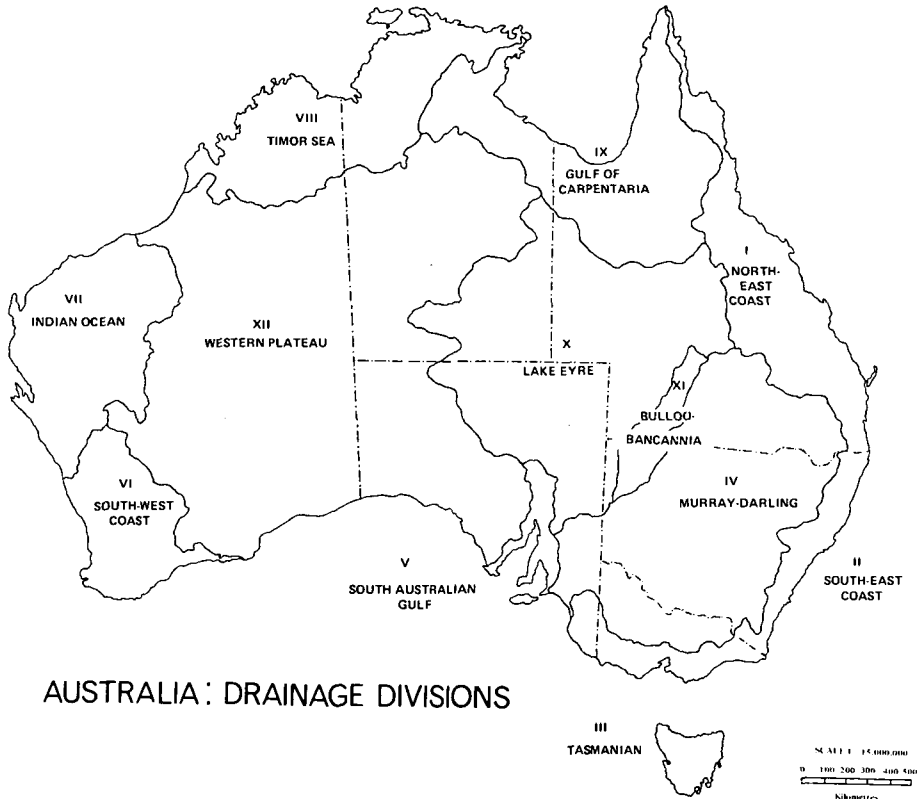
(iii) *Fractured rocks* comprises hard igneous and metamorphosed rocks which have been subjected to disturbance and deformation. Aquifers resulting from the weathering of any rock type are also included in this group. Water is transmitted mainly through joints, bedding planes, faults, caverns, solution cavities and other spaces in the rock mass.

The quality of groundwater varies considerably and sources are subject to pollution in much the same way as surface supplies. As a general rule, groundwater from shallow unconsolidated sediments is of good quality but there are instances where groundwater has been polluted, particularly around major urban centres, by sewerage effluent, drainage from refuse tips and from specific industrial pollutants. Supplies from sedimentary basins and fractured rocks are more variable in both quality and quantity, especially in the more arid regions of the continent. High nitrate concentrations tend to be a common occurrence in groundwaters in northern and central Australia.

### Drainage divisions and the use of surface and groundwaters

To promote a unified approach, river basins or groups of river basins have been adopted as the primary units of assessment. The *Review of Australia's Water Resources 1975* (Department of National Development and Energy, Australian Water Resources Council, Canberra) contains a summary of the 244 river basins grouped into twelve divisions, together with a map showing the divisions. (See below.)

The conjunctive approach to water resources, even to importing water from outside the region, generally makes more water available for use than would be the case with independent use of the various sources. Year Book No. 61, pages 867-8 contains details of the conjunctive use of surface and groundwaters.



AUSTRALIA: DRAINAGE DIVISIONS

PLATE 37

In a recent report on Australia's water resources—*Water 2000*, Department of Resources and Energy, Canberra 1983, the exploitable yield of surface water for each river basin (aggregating to Drainage Divisions) at the point of lowest practical downstream development, using the type of hydraulic structure considered technically feasible, has been re-assessed. These estimates take into account average annual flow, variability of flow, water quality and the availability of suitable sites for storage, but do not take into account economic factors.

**SURFACE WATER: ESTIMATES OF RUNOFF, TOTAL POSSIBLE EXPLOITABLE YIELD AND  
CURRENT USE BY DRAINAGE DIVISIONS**

*Sources: Snowy Mountains Engineering Corporation 1983; Australian Water Resources Council 1981*

Drainage division		Surface water (thousand million M <sup>3</sup> per annum)			Use as percentage of exploitable yield(%)
		Runoff	Total possible exploitable yield(a)	Use(b)	
I	North-East Coast	91	26	0.9	3
II	South-East Coast	45	15	2	13
III	Tasmania	53	35	0.3	1
IV	Murray-Darling	23	13	11	85
V	South Australian Gulf	1	0.3	0.1	33
VI	South-West Coast	7	2	0.4	20
VII	Indian Ocean	4	0.2	ns	—
VIII	Timor Sea	81	16	0.1	1
IX	Gulf of Carpentaria	131	10	ns	—
X	Lake Eyre	3	0.1	ns	—
XI	Bulloo-Bancannia	1	ns	ns	—
XII	Western Plateau	ns	ns	ns	—
<b>Australia</b>		<b>440</b>	<b>117.6</b>	<b>14.8</b>	<b>13</b>

(a) Exploitable yield is estimated total divertible fresh and marginal water at the lowest practicable point of impoundment, taking account of technical factors but not economic, environmental or social constraints. (b) Urban, industrial and agricultural uses of water only. In-stream uses such as hydro-electric generation are not included.  
ns=not significant.

### Water quality

The quality of surface waters in Australia varies greatly and is controlled by climate, geology, stream flow rates, biological activity and land use. Most of the variability is related to water events such as storm flows, floods and drought. Water pollution is generally at a low level compared to other similarly developed countries. The great majority of Australians enjoy domestic, irrigation and recreational waters of good to excellent quality.

Very little is known of the water quality conditions which prevailed prior to European settlement and development in Australia. It is thus difficult to judge the full impact of urban, agricultural, industrial and mining developments, and the effects that water resource development measures, such as large dams, have had on the quality of the resource. Levels of toxic pollutants have undoubtedly increased, as have the salt and sediment loads of the rivers. While water quality would, at times, have been poor prior to settlement, quality levels are believed to have generally declined. On the other hand, regulation of major rivers has reduced some of the water quality impacts of floods and droughts.

A better appreciation of water quality in recent times has led to much improved management. Measurable improvements in water quality over the last decade have resulted from pollution controls in industry and mining, and more effective sewage treatment. Means of control of pollution from widespread agricultural activity such as problems of salinity and turbidity, are under development.

The major water quality issues and problems faced in Australia are salinity, turbidity, excessive plant and algal growths (eutrophication), and water treatment for small community water supplies. There is also a lack of data, information and research on all aspects of water quality and the protection of aquatic species and habitats. Many of the severe pollution problems found in other countries have been avoided in Australia, because of the general absence of highly polluting industries and the location of major cities on or near the coastline enabling ocean disposal of wastes.

Groundwater is an important substitute for surface water in many parts of the country such as in the arid interior where the Great Artesian Basin provides the only reliable continuous supply of water for stock and domestic purposes. This Basin underlies 23 per cent of the continent but the high ratio of sodium to calcium and magnesium ions has an adverse effect on soil structure, rendering it impervious and generally unsuitable for irrigation.

Groundwater is increasing in importance as a source of water for irrigation, industry and domestic supply. The possible yield and use of groundwaters in the twelve drainage divisions is shown below.

Increasing use is made of conjunctive schemes, for example, where groundwater supplies are tapped to augment surface water or where, as in the Burdekin Delta, groundwater aquifers are artificially recharged during the summer wet season to enable water to be stored at low cost with negligible evaporation.

**GROUNDWATER ESTIMATES OF TOTAL POSSIBLE YIELD AND CURRENT USE BY DRAINAGE DIVISION**

*Sources: Bureau of Mineral Resources 1983; Australian Water Resources Council 1981*

Drainage division	Groundwater (thousand million M <sup>3</sup> per annum)		Use as percentage of possible yield (%)
	Total possible yield (a)	Use (b)	
I North-East Coast	3	0.7	23
II South-East Coast	4	0.5	13
III Tasmania	16	ns	—
IV Murray-Darling	6	0.8	13
V South Australian Gulf	0.03	0.08	267(c)
VI South-West Coast	2	0.2	10
VII Indian Ocean	0.3	0.05	17
VIII Timor Sea	21	0.03	0.1
IX Gulf of Carpentaria	14	0.02	0.1
X Lake Eyre	2	0.02	1.0
XI Bulloo-Bancannia	0.05	ns	—
XII Western Plateau	2	0.03	2.0
<b>Australia</b>	<b>70.38</b>	<b>2.43</b>	<b>3.5</b>

(a) Potential yield is annual recharge plus depletion of the aquifer at a rate of 1% per annum. Fresh groundwater has less than 1,000 parts per million total dissolved solids. (b) Urban, industrial and agricultural uses only of water of any quality. (c) Includes use of a significant proportion of marginal and brackish water. If groundwater in excess of 1,000 parts per million total dissolved solids were included, the ratio would be 88%.

ns = not significant

The first *National survey of water use in Australia*, published in 1981, gathered water use data on a national scale. The data provides a sound basis for the efficient utilisation of existing resources and for the planning of future projects. A summary of the results of the survey is given in the table below.

**ESTIMATED ANNUAL WATER USE IN 1977 FOR AN AVERAGE CLIMATIC YEAR BY DRAINAGE DIVISION**

*(Source: The first National survey of water use in Australia; Department of National Development and Energy; Australian Water Resources Council, Occasional Papers Series No. 1; AGPS 1981)*

Drainage division	Surface waters (10 <sup>6</sup> M <sup>3</sup> )			Ground waters (10 <sup>6</sup> M <sup>3</sup> )			Totals (10 <sup>6</sup> M <sup>3</sup> )					
	Urban industrial	Irrigation	Other rural	Total (a)	Urban industrial	Irrigation	Other rural	Total (a)	Urban industrial	Irrigation	Other rural	Total (a)
North-East Coast	388	473	—	861	40	670	—	710	427	1,210	126	1,770
South-East Coast	1,400	453	186	2,030	125	368	52	545	1,540	821	238	2,590
Tasmania	157	110	25	292	0.5	—	—	0.5	157	110	25	292
Murray-Darling	287	10,200	491	11,000	42	504	233	778	337	10,700	775	11,800
South Australian Gulf	37	24	10	70	9	63	7	79	222	88	29	339
South-West Coast	187	224	20	431	182	24	5	210	369	248	25	642
Indian Ocean	0.5	—	1	1	36	6	5	47	36	6	6	48
Timor Sea	14	67	6	87	15	0.5	10	25	29	68	19	115
Gulf of Carpentaria	20	2	—	22	15	0.5	1	16	35	2	37	73
Lake Eyre	2	1	2	5	10	1	5	16	13	1	43	57
Bulloo-Bancannia	—	—	—	—	—	—	—	—	1	—	3	4
Western Plateau	0.5	—	1	1	5	2	19	26	21	2	22	44

(a) Totals may not be the sum of the figures in any row or column as figures have been rounded, and water sources such as farm dams, not falling in the categories of surface or groundwater, have been included in the totals section.

Total water use (gross applied water) in Australia for 1977, adjusted for average climatic conditions, has been estimated at 17,800 x 10<sup>6</sup> cubic metres annually, corresponding to an overall total per capita use of about 3,500 litres per day. Of this total, approximately 74 per cent is for irrigation, 18 per cent is for urban/industrial uses and 8 per cent is for other rural water use. Withdrawals for hydro-electric power have not been included. In terms of sources for the water used, by far the largest proportion (about 84 per cent) of water is drawn from surface water sources. Groundwater sources, although of importance in some regions, account for only 14 per cent of the water used. A very small proportion, less than 0.5 per cent of

water used is derived from artificial recharge or from reclaimed water. Sources for the remaining water used were not indicated and would include supplies from small bores, rainwater tanks, farm dams and the like. Of the total surface water withdrawals, 77 per cent are used for irrigation, 18 per cent for urban/industrial purposes and 5 per cent for other rural purposes. Corresponding figures for groundwater withdrawals are 67 per cent, 18 per cent and 14 per cent respectively.

### Major dams and reservoirs

A map titled *Australia—Dams and Storages*, published in 1975 by the Department of Minerals and Energy, shows the location, height of dam wall, capacity and purpose of Australia's major dams and water storages. In the lists below, only dams with a gross reservoir capacity of more than 100 million cubic metres have been included. Hume Reservoir lies on the New South Wales-Victoria border.

#### MAJOR DAMS AND RESERVOIRS IN AUSTRALIA

Name and year of completion	Location	Gross capacity (million cubic metres) (a)	Height of wall (metres) (b)	Purpose
NEW SOUTH WALES				
Eucumbene (1958)	Eucumbene River	4,807	116	H/E, IR, R, U
Hume (1936, 1961)	Murray River, near Albury	3,038	51	H/E, IR, R, U
Warragamba (1960)	Warragamba River	2,057	137	H/E, U
Menindee Lakes (1960)	Darling River, near Menindee	1,794	18	IR, R, U
Burrendong (1967)	Macquarie River, near Wellington	1,677	76	F/C, IR, R, U
Blowering (1968)	Tumut River	1,628	112	H/E, IR, R
Copeton (1976)	Gwydir River	1,364	113	IR, R, U
Wyangala (1936, 1971)	Lachlan River	1,220	85	IR, R
Burrinjuck (1927, 1956)	Murrumbidgee River	1,026	79	IR, R
Talbingo (1971)	Tumut River	921	162	H/E, IR, R, U
Jindabyne (1967)	Snowy River	688	72	H/E, IR, R, U
Lake Victoria (1928)	Murray River, near S.A. border	680	-	IR, R, U
Keepit (1960)	Namoi River, near Gunnedah	423	55	F/C, IR, U
Windamere (1984)	Cudgegong River, near Mudgee	368	69	IR
Glenbawn (1958)	Hunter River, near Scone	360	78	F/C, IN, IR, R, U
Glennies Creek (1983)	Hunter Valley, near Singleton	284	68	IN, IR, R, U
Tantangara (1960)	Murrumbidgee River	254	45	H/E, IR, R, U
Avon (1927)	Avon River	214	72	U
Mangrove Creek (1983)	Mangrove Creek, near Gosford	176	79	U
Grahamstown (1969)	Grahamstown, near Newcastle	153	12	IN, U
Lake Brewster (1952)	Lachlan River, near Hillston	150	-	IR, R
Liddell (1968)	Gardiner Creek, near Muswellbrook	148	41	IN
Tallowa (1977)	Shoalhaven River, near Nowra	135	43	U
Googong (1978)	Queanbeyan River	125	59	U, F/C
VICTORIA				
Dartmouth (1979)	Mitta Mitta River	4,000	180	F/C, H/E, IN, IR, R
Eildon (1927, 1955)	Upper Goulburn River	3,392	79	F/C, H/E, IN, IR, R
Thomson (1984)	Thomson River, near Moe	1,175	164	IR, U
Waranga (1910)	Near Rushworth (Swamp)	411	12	IR, U
Mokoan (1971)	Winton Swamp, near Benalla	365	10	IR
Rocklands (1953)	Glenelg River	336	28	R, U
Eppalock (1964)	Campaspe River	312	45	IR, U
Cardinia (1973)	Cardinia Creek, near Emerald	287	79	U
Upper Yarra (1957)	Yarra River	207	89	U
Blue Rock (1984)	Tanjil River, near Moe	200	75	IN, U
Glenmaggie (1927, 1958)	Macalister River	190	37	IR
Cairn Curran (1958)	Loddon River, near Newstead	149	44	IR
Yarrowonga (1939)	Murray River	117	22	IR
Tooolondo (1952, 1960)	Natural depression, near Horsham	107	-	IR, R
QUEENSLAND				
Fairbairn (1972)	Nogoa River, near Emerald	1,440	49	IN, IR, U
Wivenhoe (1985)	Brisbane River, near Ipswich	1,150	59	F/C, H/E, U
Somerseset (1959)	Stanley River, near Esk	893	50	U
Fred Haigh (1975)	Kolan River, near Gin Gin	586	52	IR
Ross River (1974)	Near Townsville	417	35	F/C, U
Tinaroo Falls (1958)	Barron River, near Atherton	407	47	H/E, IR
Awoonga High Dam (1985)	Boyne River, near Gladstone	270	46	IN, U
Glenlyon (1976)	Pike Creek, near Stanthorpe	254	62	IR
Boondooma (1983)	Boyne River, near Proston	212	50	IN, IR
North Pine (1975)	North Pine, near Brisbane	205	44	U
Koombooloomba (1961)	Tully River, near Ravenshoe	201	52	H/E
Wuruma (1968)	Nogo River, near Eidsvold	194	46	IR
Eungella (1969)	Broken River, near Eungella	131	46	IN, U, IR
Julius (1977)	Leichhardt River, near Mt Isa	127	35	IN, U
Leslie Dam Stage II (1985)	Sandy Creek, near Warwick	108	34	IR, U
Lake Moondarra (1957)	Leichhardt River, near Mt Isa	107	27	IN, U
Beardmore (1972)	Balonne River, near St George	101	15	IR, R, U



MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued*

<i>Name and year of completion</i>	<i>Location</i>	<i>Gross capacity (million cubic metres) (a)</i>	<i>Height of wall (metres) (b)</i>	<i>Purpose</i>
<b>WESTERN AUSTRALIA</b>				
Lake Argyle (Ord) (1971)	Ord River, near Kununurra	5,720	99	F/C, H/E, IR
South Dandalup (1973)	Near Dwellingup	208	41	U
Wellington (1933, 1944, 1960)	Collie River	185	37	IR, R
Serpentine (1961)	Serpentine River	185	55	U
<b>TASMANIA</b>				
Lakes Gordon and Pedder (1974)				
Gordon	} South West	11,728	140	} H/E
Scotts Peak		} 2,963	43	
Serpentine			38	
Edgar			17	
Miena (1967)	Great Lake	2,390	18	H/E
Lake St Clair (1938)	Central Plateau	2,000(est.)	3	H/E
Mackintosh (1980)	Mackintosh River, near Queenstown	} 922	75	} H/E
Tullibardine (1979)	Tullibardine River, near Queenstown		25	
Lake Echo (1956)	Lake Echo	725	19	H/E
Arthur's Lake (1965)	Source of Lake River, near Great Lake	571	17	H/E
Lake King William (Clark) (1949, 1966)	Derwent River	540	67	H/E
Devils Gate (1969)	Forth River, near Devonport	180	84	H/E
Rowallan (1967)	Mersey River	130	43	H/E
Bastyan (1983)	Pieman River, near Queenstown	124	75	H/E
Cethana (1971)	Forth River, near Devonport	180	110	H/E
<b>NORTHERN TERRITORY</b>				
Darwin River (1972)	Darwin River	259	31	U

(a) Includes 'dead water', i.e., water below the operational outlet of the reservoir. (b) As a general rule, the figures shown for height of wall refer to the vertical distance measured from the lowest point of the general foundation to the crest of the dam, i.e., the level of the roadway or walkway on the dam.

ABBREVIATIONS: H/E—hydro-electricity, F/C—Flood control and/or mitigation, IN—Industrial and/or mining, IR—Irrigation, R—Rural-stock and domestic, U—Urban supplies.

## MAJOR DAMS AND RESERVOIRS UNDER CONSTRUCTION OR PROJECTED

<i>Name</i>	<i>Location</i>	<i>Gross capacity (million cubic metres) (a)</i>	<i>Height of wall (metres) (b)</i>	<i>Purpose</i>
<b>UNDER CONSTRUCTION</b>				
Burdekin Falls Dam	Burdekin River, near Townsville, Qld	1,860	68	IR, U
Crotty Dam	King River, near Queenstown, Tas.	1,091	80	H/E
Glenbawn Dam enlargement	Hunter River, near Scone, N.S.W.	870	100	F/C, IN, IR, R, U
Lower Pieman	Pieman River, near Queenstown, Tas.	641	122	H/E
Proserpine Dam	Proserpine River, near Bowen, Qld	500	45	IR, U
Split Rock	Manilla River, Namoi Valley N.S.W.	370	66	IR
Callide Dam (Stage II)	Callide Creek, near Biloela, Qld	128	35	IR, U, IN
Bjelke Petersen	Barker Creek, near Murgon, Qld	125	33	IR
Harding Dam	Harding River, W. A. (opened May, 1985)	114	42	IN, U
<b>PROJECTED</b>				
Spencer	Denison Creek, near Nebo, Qld	127	24	Mining, water supply

For footnotes and abbreviations see previous table.

## Water management

Australia's water resources are managed by a multitude of irrigation authorities, metropolitan water boards, local government councils and private individuals. State authorities dominate the assessment and control of water resources as, under the Commonwealth Constitution, primary responsibility for management of water rests with the individual State governments. The Commonwealth Government is responsible for matters relating to its Territories, and participates indirectly through financial assistance or directly in the co-ordination or operation of interstate projects through bodies such as the River Murray Commission. In other instances where political boundaries intersect some river basins, co-operation between governments has been necessary to develop resources.

Australia's attitudes to water resources management have changed substantially over the last twenty years. Water management is no longer seen just in terms of storing water and regulating streams for consumption, but also in terms of conserving unregulated streams in an unmodified landscape for wild life preservation or recreation purposes or for possible social or economic use by future generations. In addition, agricultural, industrial and urban development has led to greater attention being paid to water quality management.

The development of water resources in the States has an important bearing on the Commonwealth's broad interests in economic management, resource allocation, foreign exchange earnings, distribution of income and related matters. Consequently, the Commonwealth has participated in water resource matters in the States in instances of mutual Commonwealth/States concern or in the national interest.

#### **Water 2000—A Perspective to the Year 2000**

In 1982, the Commonwealth Government commissioned a study to provide a perspective on Australia's water resource needs and problems to the year 2000. The Steering Committee Report and a series of 13 consultants' reports were completed in 1983 and are available for purchase by the general public at Australian Government Publishing Service outlets.

The Water 2000 report indicated in general terms that Australia has sufficient surface and underground water to meet anticipated demands to the year 2000 at reasonable costs; however, regional or local shortages of water supply already occur and will continue.

In a general context, the report identified a number of major issues facing the water industry over the next two decades.

These were:

- protection and improvement of water quality
- more efficient use of currently available water supplies
- conservation of existing water supplies by more appropriate allocation and financial policies
- co-ordinated management and use of water and land resources
- adequate provision for instream uses
- improvements in data collection and analysis and information dissemination
- provision of adequate funding for water resources purposes including research, and
- continuing Commonwealth Government involvement.

Financial constraints, as well as environmental and social considerations were seen likely to lead to an increasing emphasis on greater efficiency in the use of existing supplies including the use of treated wastewater and marginal quality water for non-potable purposes. Substantial scope was seen to exist for improved efficiency in water use, particularly in irrigation.

#### *Commonwealth water policy*

In September 1984, the Commonwealth released its new water policy based on the recommendations of the Water 2000 report. Objectives of the new policy are:

- the availability of water, adequate in quantity for all beneficial uses
- the adoption of measures which improve the efficiency of water supply and use
- the development of a comprehensive approach to inter-related water and land management issues
- the encouragement of comprehensive long-term plans for the development and management of water resources, and
- the implementation of financial and economic policies which distribute the costs of water supplies equitably and provide incentives for the more economic use of resources at government and individual level.

As part of the new water policy, funds are available to the States and the Northern Territory under a new program, the Federal Water Resources Assistance Program (FWRAP), which commenced in 1984-85. Purposes for which funds are available include:

- water resource development or management activities/projects for agriculture, urban or industrial purposes
- floodplain management
- collaborative information programs
- salinity reduction and land drainage
- State-wide and broad regional water plans, and
- public education.

The Country Towns Water Supply Improvement Program, which commenced under the Community Employment Program, has been continued as a sub-program of FWRAP.

## **Research and continuing assessment of water resources**

### **Australian Water Resources Council (AWRC)**

The Australian Water Resources Council was established in 1963 by joint action of the Commonwealth and State Governments. The Council consists of the Commonwealth and State Ministers who have primary responsibility for water resources; it is chaired by the Commonwealth Minister for Resources and Energy.

The Council provides a forum for the exchange of views on water-related issues, and has been instrumental in promoting co-operation and collaboration on matters of mutual interest to its members. Its terms of reference include the promotion of programs to assess Australia's water resources, the encouragement of education and training in hydrology, the co-ordination and dissemination of information, the promotion of water research and development of liaison with overseas and international organisations in the field of water resources.

The Council is supported by a Standing Committee, comprising permanent heads of relevant State authorities and the Commonwealth Department of Resources and Energy. CSIRO and the Bureau of Meteorology are also represented and Ministers can nominate additional representatives in accordance with the requirements of the agenda for each meeting.

Following a review held in late 1984, Standing Committee is now serviced by four advisory committees which consider issues in water industry planning, surface water and catchments, groundwater and water technology. The Council can also establish ad hoc task groups, for advice on particular topics, and is currently being assisted by an Education and Training Working Group and a National Co-ordinating Committee on Aquatic Weeds.

### **Water resources assessment**

In 1964, in response to a perceived lack of water resources data throughout much of Australia, the Commonwealth Government instituted, through the AWRC, the National Water Resources Assessment Program. The original aim was to expand the stream gauging network in Australia and increase the level of information on groundwater. In 1974 the collection of water quality data was added to the program. The program has been successful in filling many of the data gaps which existed prior to 1964 and in providing data and information for water resources planning, construction projects and in the development of the understanding of the nature and function of Australia's water resources. However, the *Water 2000* report recommended that there should be separate but complementary Commonwealth and State water resources assessment programs, based on relevant national and State data requirements respectively, with each funding its own program. Discussions are currently underway with the States on the implementation of a new strategy for water resources data collection and information dissemination.

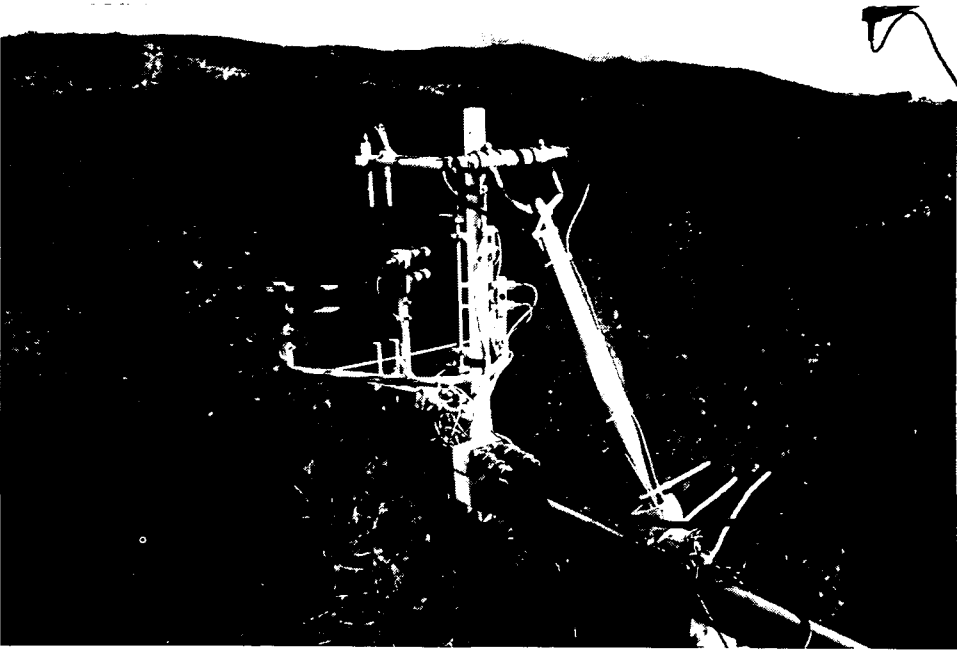
### **Water resources research**

The Department of Resources and Energy is primarily responsible for the Commonwealth interests in water resource matters, including research policy and co-ordination at the Commonwealth level. The Department has provided funds for and has administered a water research program on behalf of the AWRC since 1968. \$360,000 has been made available in 1985-86 to support projects in fields such as aquatic biology, effluent treatment, drinking water quality, evapo-transpiration, salinity, soil-water interaction and activities to effectively disseminate the results of research.

Water research is undertaken at the Commonwealth level by the Commonwealth Scientific and Industrial Research Organization (CSIRO); the Bureau of Meteorology; the Australian Atomic Energy Commission (AAEC); the Bureau of Mineral Resources, Geology and Geophysics (BMR); and the Alligator Rivers Regional Research Institute (ARRRI). The water research programs of these major national agencies are coordinated through a Water Research Liaison Committee which advises the Ministers of Resources and Energy and of Science and Technology on water research in Commonwealth Government agencies.

At the State level, water agencies have extensive laboratory facilities for water quality testing. However, most water related research is undertaken in research centres associated with agriculture, fisheries, forestry and environmental authorities. At the regional level, some of the larger authorities providing water supply and sewerage services undertake applied research on a very limited scale.

A significant proportion of Australian water research is undertaken by researchers in tertiary education institutions with the aid of either internal funding or grants from outside



A sonic anemometer, a rapid and accurate wind speed measuring instrument, positioned over Uriarra forest in an experiment conducted by micrometeorologists. Such measurements are essential in predicting evaporation rates from catchment areas.

*CSIRO—Division of Environmental Mechanics*



A spray irrigation system being used to study the growth of rice under intermittent irrigation. Rice uses a large proportion of the irrigation water in south eastern Australia and reducing the quantity applied will increase the efficiency of production and reduce accessions to the groundwater.

*CSIRO—Centre for Irrigation Research*

bodies, such as the AWRC or the Australian Research Grants Committee. Water research is carried out within a range of disciplines, including the biological and social sciences and engineering.

Following a review of water research, undertaken by the Interim Council for an Institute of Freshwater Studies, the Commonwealth Government has established the Australian Water Research Advisory Council, to advise on national water research needs and on a Commonwealth funded program of Research. An amount of \$250,000 has been allocated to commence the research program in 1985-86.

CSIRO is the major national body undertaking water research. Principal water research groups in CSIRO are:

- *Division of Groundwater Research.* The Division's research is concerned with the processes affecting the amount and quality of groundwater and includes natural factors and responses to man-made stresses such as mining, agriculture, waste disposal, artificial recharge and pumping. The Division develops and applies physical and geochemical techniques and instruments in its research. The aim of the research is to provide techniques which will enable improved management of the resource.
- *Centre for Irrigation Research.* The Centre's research seeks to improve the management of water resources and gain an understanding of the function of wetlands. Research underway includes investigations of algae growth and nutrient relations in turbid waters, the on-farm reuse of irrigation water, and physiological, nutritional and productivity studies on aquatic macrophytes with the emphasis on weed control and on their use for treating waste waters.
- *Division of Water and Land Resources.* This Division's water research is carried out principally within its Catchment Hydrology program. The aims of this program are to provide a basis for the management of catchments by developing a quantitative understanding of climate-water-land interactions at varying scales and to undertake analysis of the critical processes in catchment hydrology. It also aims to develop an understanding of hydrologic processes at the mesoscale to assist practising hydrologists with appropriate design techniques and to identify and quantify the causes of salinisation, the influence of vegetation on water quality, and, through sediment analysis, the nature and extent of long-term erosion over significant areas. Finally, the Program seeks to develop and apply remote sensing and modelling techniques to mesoscale water balance estimation.
- *Division of Chemical and Wood Technology.* The water research undertaken in this Division is concentrated on the development of new water purification techniques and seeks to extend Australia's water resources through improved purification technology. Research is also directed at cheaper and more effective processes for the treatment of sewage and industrial effluents.
- *Other Divisions.* Research related to water in the natural environment and in agriculture and industry is undertaken by a number of the CSIRO Divisions: primarily the Divisions of Soil, Environmental Mechanics, and Entomology.

### International aspects

#### International water organisations

Australia liaises with international bodies and United Nations agencies concerned with water resources and participates in their activities in various ways.

*Economic and Social Commission for Asia and the Pacific (ESCAP).* This United Nations Commission, through its Committee on Natural Resources, reports on water policy issues in addition to other activities. By participation in this conference and in seminars arranged on selected topics, Australia contributes to, and benefits from, identification of and discussions on the main problems of water resources management in a densely populated, developing region. Australia is also an active participant in ESCAP's water information exchange system.

*Organisation for Economic Co-operation and Development (OECD).* Australia's membership of the OECD since 1970 has involved participation in the work of the Environment Committee, particularly the Water Management Group and its Group of Economic Experts, which investigates problems which are the subject of international concern, and the development of strategies to resolve them.

*United Nations Educational, Scientific and Cultural Organization (UNESCO).* Australia has contributed to the international program designed to advance the science and practice of

hydrology, International Hydrology Program (IHP), through an Australian UNESCO Committee for the IHP. Australia is a member of the Intergovernmental Council for IHP.

*World Meteorological Organization (WMO).* Through its Commission for Hydrology, WMO is the specialised UN agency dealing with operational hydrology—the measurement of basic hydrological elements, water resources assessment and hydrological forecasting. WMO has an Operational Hydrology Program (OHP) which is co-ordinated with and complemented by UNESCO's IHP. Within the OHP is the Hydrological Operational Multipurpose Subprogram (HOMS) involving the organised transfer of hydrological technology among members. Australia is a contributor to HOMS and has established a HOMS National Reference Centre within the Secretariat of the Australian Water Resources Council (AWRC). In Australia, hydrological and meteorological activities relative to water resources are co-ordinated by the Secretary of the AWRC as hydrological advisor to the Permanent Representative of WMO in Australia, the Director of Meteorology.

*United Nations Environment Program (UNEP).* Australia participates in a world registry of major rivers covering discharge and pollutants and of clean rivers so defined and in the development of methodology for analysis and planning of water resources management.

*World Health Organisation (WHO).* Australia is participating in the water quality monitoring component of the WHO Global Environmental Monitoring System (GEMS) which provides a consistent global overview of changes in water quality.

*Louisiana World Exposition.* Australia participated in an international exposition with the theme "The World of Rivers: Fresh Water as a Source of Life" held in New Orleans, U.S.A. from May to November 1984.

### National and interstate agreements

In the section on *Water Management* above, reference was made to the responsibilities of government on the national, state and local authority levels. In this section, some additional details are provided on their roles in the management of water resources.

The flows of many of the tributaries to the River Murray which make up the Murray-Darling Basin have been regulated for irrigation and water supply purposes. Approximately  $27 \times 10^9$  cubic metres of storage has been constructed in the Murray-Darling basin. Of this, about  $12 \times 10^9$  cubic metres has been constructed along the River Murray, including the barrages, locks and weirs. With an average annual diversion from the Murray of approximately  $4 \times 10^9$  cubic metres, the degree of resource utilisation is only approximately 40% (see RMC Annual Report, 1983–84).

#### River Murray Waters Agreement

The *River Murray Waters Act 1915* ratified an Agreement between the Commonwealth and the States of New South Wales, Victoria and South Australia. Year Books prior to No. 39 contain a number of summaries of the historical events leading to the Agreement of 1914 which provided for a minimum quantity of water to pass to South Australia. Further details on the River Murray Waters Agreement and subsequent amendments may be found in Year Book No. 61, pages 870–2.

The River Murray Commission, established in 1917 to give effect to the Agreement, is responsible for the management of the flow of water in the River Murray, the construction, maintenance and operation of storages and other regulatory works to make water available for irrigation, navigation and urban purposes; and for the allocation of water between the States of New South Wales, Victoria and South Australia. It also has responsibility for management of the catchment above Hume Dam and for the management of the flow of water in the Darling River below Menindee Lakes.

Dartmouth and Hume Reservoirs together with Lake Victoria and the Menindee Lakes storages, are the key storages operated by the River Murray Commission to regulate the River Murray system. A series of weirs along the river provide for irrigation diversions and pumping facilities by the three States. The major diversion weir is at Yarrowonga. All of the weirs except Yarrowonga have locks to enable navigation of the river to be maintained.

A new River Murray Waters Agreement, which was approved by legislation and proclaimed on 1 February 1984, broadens the role of the River Murray Commission to allow for more direct and independent action in the management of the Murray. The new Agreement enables the Commission to consider water quality, recreation, flood mitigation and environmental issues in relation to the management of the river system, in addition to its traditional role.

In relation to water quality, the Commission is now authorised to:

- initiate proposals for the protection or improvement of River Murray water quality
- co-ordinate or carry out investigations and studies into the feasibility of works or measures for the improved conservation and regulation of the waters of the River Murray, to protect or improve its quality
- measure and monitor water quality of the waters of the Murray and its tributaries
- formulate water quality objectives and recommend water quality standards for adoption by the Contracting Governments, and
- make recommendations to Contracting Governments or any authority, agency or tribunal on any matter which may affect the quality or quantity of the River Murray waters.

A particular feature of the new Agreement is that the State Contracting Governments are required to advise the Commission of any proposal within their States which could significantly affect the quality and quantity of the River Murray.

The new Agreement enables the Commission to clearly define the principles of water sharing laid down in the original Agreement; to enable a water accounting system to be introduced and to carry out river protection works and remedial works (including salinity mitigation works) where the need arises. The Commission can also recommend future amendments to the new Agreement.

#### **New South Wales—Queensland Border Rivers Agreement**

This agreement came into effect in July 1947 and provided for the construction of a dam and several weirs on the rivers which constitute part of the boundary between the two States. This Act was amended in November 1968 to provide for storages on Pike Creek (Queensland) and the Mole River (New South Wales), construction of further weirs on the Border Rivers, regulators on effluents of the Border Rivers, and works for improvement of flow in streams which intersect the Queensland-New South Wales border west of Mungindi.

Glenlyon Dam, on Pike Creek, with a storage capacity of 254 million cubic metres was completed in 1976; and nine regulators, eight on the Balonne-Culgoa River System and one on the offtake of the Boomi River, have been constructed.

The Dumaresq-Barwon Border Rivers Commission, constituted of Representatives of both States, administers the Agreement and the sharing of water.

#### **Snowy Mountains Hydro-electric Scheme**

The Snowy Mountains Scheme is a dual purpose hydro-electric and irrigation complex located in south-eastern Australia and on its completion was one of the largest engineering works of its type in the world. It impounds the south-flowing waters of the Snowy River and its tributary, the Eucumbene, at high elevations and diverts them inland to the Murray and Murrumbidgee rivers through two tunnel systems driven through the Snowy Mountains. The Scheme also involves the regulation and utilisation of the headwaters of the Murrumbidgee, Tumut, Tooma and Geehi rivers.

The Scheme was designed and constructed by the Snowy Mountains Hydro-electric Authority, a statutory body established by the Commonwealth Government in 1949, and was substantially completed by 1974. Its installed generating capacity is 3,740 MW and its average annual electricity output is over 5,000 GWh. An average of  $23 \times 10^8$  cubic metres of water per year has become available for irrigation in the Murray and Murrumbidgee rivers as a result of the Scheme.

Details of the diversions and associated power works, together with details of construction, are given in Year Book No. 62, pages 444-448.

The Snowy Mountains Council, constituted of representatives of the Governments of the Commonwealth, New South Wales and Victoria and the Snowy Mountains Hydro-electric Authority, was established on 2 January 1959. Its main functions are to direct and control the operation and maintenance of the permanent works of the Snowy Mountains Scheme in particular the control of water and the allocation of loads to generating stations.

(see special article 'The Snowy Mountains Hydro-Electric Scheme' following Chapter 18 of this Year Book)

### **States and Territories**

The foregoing text deals with water conservation and irrigation in Australia generally and with international, national and interstate aspects. The following survey covers the local pattern of water resources and the steps taken by the State Governments to bring about their development. In the various States, water policies tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria, almost every form of water scheme is in operation. In New South Wales the management of irrigation water supplies is an area of major emphasis, with approximately two thirds of a million hectares under irrigation. In Queensland, up to the present, the predominant emphasis has fallen on water (mainly underground sources) for stock and the development of small irrigation schemes in sub-humid and humid areas, principally to stabilise production of such crops as tobacco, sugar, cotton and pastures. Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest relates almost exclusively to hydro-electric generation. The Northern Territory is concerned primarily with water supplies for population centres and mining and pastoral industries.

## New South Wales

### Administration

The Water Resources Commission, New South Wales, is a Statutory Authority formed in 1976 by the reconstitution of the Water Conservation and Irrigation Commission. Administrative authority is vested in the Chief Commissioner, who is assisted by two full-time Commissioners. Provision exists for the appointment of two part-time Commissioners. All five are appointed by the Governor. An important function of the Commission is planning for the co-ordinated development and allocation of the State's water resources. This entails the assessment and projection of demand for all purposes and also involves the quantitative and qualitative assessment of the available resources. Another important planning function relates to flood plain management. The search for, and surveillance of, groundwater for water supply is another important planning activity. The operations of the Commission cover water conservation, control of irrigation areas, the establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, assistance for farm water supply schemes, and river improvement works.

Under the *Water Act 1912* (as amended) the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Commission for the benefit of the Crown. A system of licences operates for the protection of private works of water conservation, irrigation, water supply, drainage and prevention of inundation.

For particulars of the New South Wales—Queensland Border Rivers Agreement ratified by Acts of both States in 1947, see page 325.

### Irrigation summarised

The bulk of irrigated land is along the Murray and its tributary, the Murrumbidgee, regulated by the Dartmouth, Hume, Blowering and Burrinjuck dams. Smaller areas are served by the Wyangala Dam, Lake Cargelligo and Lake Brewster on the Lachlan (a tributary of the Murrumbidgee), by Glenbawn Dam and Glennies Creek Dam in the Hunter Valley, by Keepit Dam on the Namoi River, by Burrendong Dam on the Macquarie River, by Windamere Dam on the Cudgegong, by the Menindee Lakes Storage on the Darling River, by Copeton Dam on the Gwydir River, Chaffey Dam on the Peel River and Pindari and Glenlyon Dams in the New South Wales/Queensland Border River Valley. There are a number of other smaller storages on other rivers in the State. Weirs and dams have been provided for town supplies, etc. in many places. In addition substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including irrigation areas, irrigation districts, water trust districts, flood control and irrigation districts, and river improvement districts. There are nine irrigation areas, although two of these, Yanco and Mirrool, are generally described under the one heading, namely, the Murrumbidgee Irrigation Area (MIA). Others are: Coomealla, Curlwaa, Hay, Tullakool, Buronga, Mallee Cliffs and Coleambally.

A detailed description of the Murrumbidgee Irrigation Area is contained in Year Book No. 61, pages 875–7. The Water Resources Commission controls land transactions and water supplies for the MIA, but has no jurisdiction over land transactions in neighbouring irrigation districts (although it is responsible for the operation and maintenance of the water supply in these areas). The other irrigation areas follow the same administrative pattern as the MIA.



Irrigation Districts are set up under the *Water Act, 1912* (as amended) for (a) domestic and stock water supply and (b) irrigation. The essential difference between an 'Area' and a 'District' is that, in the case of the former, all the land to be included in the Area is acquired by the Crown and then sub-divided into separate holdings. Within the District, however, existing ownership of land is not disturbed other than to acquire land required for water distribution works. Since the completion of the Hume Dam, several such districts have been established along the Murray to use the New South Wales share of the stored water.

The *Water Act, 1912* (as amended) provides the Trust Districts to be constituted for domestic and stock water and irrigation, and empowers the Commission to construct, acquire or utilise necessary works. When the works are completed, they are handed over to trustees to administer. The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. There are seven of these trusts.

The Lowbidgee Flood Control and Irrigation District, the first of its kind, was constituted in 1945. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. Another district is Medgun, near Moree in the north-west.

**CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, NEW SOUTH WALES 1983-84(a)**  
(Hectares)

<i>Crops and Pastures</i>	<i>Method</i>				<i>Total</i>
	<i>Sprays</i>	<i>Furrows and/or Flood</i>	<i>Trickle (b)</i>	<i>Other and multiple methods</i>	
Pure Lucerne . . . . .	24,202	13,146	n.a.	1,084	38,432
Other pastures (sown or native) . . . . .	42,646	197,529	n.a.	10,636	250,811
Wheat . . . . .	9,318	72,671	n.a.	2,284	84,273
Other cereals for all purposes . . . . .	19,595	135,066	n.a.	5,821	160,482
Vegetables for human consumption . . . . .	8,958	3,414	187	658	13,217
Citrus fruit . . . . .	3,793	3,878	1,363	207	9,241
Other fruit . . . . .	1,343	1,089	4,364	301	7,097
Grapevines . . . . .	1,358	5,244	1,159	119	7,880
All other crops . . . . .	4,519	84,272	125	1,186	90,102
<b>Total . . . . .</b>	<b>115,732</b>	<b>516,309</b>	<b>7,198</b>	<b>22,296</b>	<b>661,535</b>

(a) Collected every 3 years. (b) Includes micro-sprays.

**SOURCES OF IRRIGATION WATER, NEW SOUTH WALES 1983-84(a)**

<i>Source of supply</i>	<i>Area irrigated</i>	<i>Percentage of total area irrigated</i>
	(hectares)	%
Surface water		
from State irrigation schemes . . . . .	379,927	57
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc (b) . . . . .	221,542	34
from farm dams . . . . .	20,463	3
<i>Total surface water . . . . .</i>	<i>621,932</i>	<i>94</i>
Underground water supply (e.g. bore, spear, well) (c)	38,640	6
Town or country reticulated water supply . . . . .	963	—
<b>Total all water sources . . . . .</b>	<b>661,535</b>	<b>100</b>

(a) Collected every 3 years. (b) Includes regulated and unregulated streams. (c) Naturally or artificially replenished.

**Future program**

The program of development in hand includes the provisions of additional dams, weirs, flood mitigation and drainage schemes and river management works.

Windamere Dam was completed on 9 November 1984 and the construction of Split Rock Dam is continuing on the Manilla River. Work is also continuing on the enlargement of Glenbawn Dam on the Hunter River.

The construction of surface and sub-surface drainage schemes continued in the Murray Valley to alleviate rising groundwater and salinity problems.

Investigations are continually being carried out to assess demand and identify worthwhile water conservation projects which could be implemented as funds become available.

A comprehensive State Water Plan has been prepared. The Plan is intended to provide a broad framework for the efficient management and orderly development of the State's water and related land resources.

For more detailed information on Water Resources in New South Wales see the chapter entitled *Water Resources* in the latest edition of the New South Wales Year Book.

## Victoria

### Administration

Victorian Governments have been active in the development of country water supplies since the 1860s when major works to supply the Bendigo goldfields were undertaken. Local trusts to construct and operate waterworks under Government supervision were provided for in the *Water Conservation Act 1881*. Development under the trust system was greatly stimulated by the *Irrigation Act 1886*, which provided for the construction of national headworks by the State, and vested in the Crown the right to the use and control of all surface waters. By 1900 there were 33 irrigation trusts and 18 other rural water supply trusts, but the system of local control was then breaking down under financial difficulties.

The *Water Act 1905* established the State Rivers and Water Supply Commission to take over Irrigation Trust districts (except the still-existing First Mildura Irrigation Trust) and to exercise the State's functions in the further control and development of surface water outside the metropolis.

The *Water (Central Management and Restructuring) Act 1984* abolished the State Rivers and Water Supply Commission and the Ministry of Water Resources, and established the Rural Water Commission of Victoria and the Department of Water Resources. The Rural Water Commission was established to provide efficient and effective water services for the irrigation sector and other uses. The objective of the Department of Water Resources is to provide advice to the Minister on all matters relevant to the activities, or functions, of the Department to ensure that the water resources of the State are managed in ways which are most beneficial to the people of Victoria.

The Melbourne Metropolitan Board of Works is a statutory corporation responsible for providing water supply, sewerage, main drainage and metropolitan parks services for the community of Metropolitan Melbourne and for the control of rivers and storages in accordance with the provisions of the Melbourne and Metropolitan Board of Works Act.

Some 150 local Water Boards are responsible for the provision of water and sewerage services to cities and towns in rural Victoria.

In addition, the Rural Water Commission provides a reticulated water supply to 111 country towns.

### Works summarised

The Rural Water Commission's storages are augmented by Victoria's half share in River Murray Commission storages. Most of this water is used for irrigation; however, another important function of the Commission is the supply of water to rural communities and for stock and domestic purposes. Approximately one quarter of irrigation production is from lands irrigated by 'private diverters' i.e. irrigators who are authorised to take water from streams, lakes etc., but who do not come within the boundaries of an irrigation district.

### Rural water supply systems

The principal irrigation systems in Victoria are:

- *Goulburn-Campaspe-Loddon*. The main storage is Lake Eildon with a capacity of 3,392 million cubic metres. The main products in these systems are dairy products, fruit, wool and fat lambs. Annual production of deciduous canning fruits in the eastern part of the system is about two thirds of Australia's total.
- *Murray River System*. The Murray Valley Irrigation Area and the Torrumbarry Irrigation System are irrigated by water diverted at the Yarrawonga and Torrumbarry

Weirs respectively. These areas are devoted mainly to dairying, fat lambs and canning fruit (Murray Valley) and dairying, fat lambs, vineyards, orchards and market gardens (Swan Hill). Downstream from Swan Hill, the First Mildura Irrigation Trust and four Commission Districts are supplied by pumping and produce mainly dried vine fruits, citrus fruits, and table and wine grapes.

- *Southern Systems.* The Maffra-Sale-Central Gippsland district, supplied from the Macalister River and regulated by Lake Glenmaggie, is devoted mainly to dairying.
- *Werribee and Bacchus Marsh.* These districts produce fresh fruit, vegetables and dairy products mainly for the local domestic market. Irrigation is supplied from the Werribee River system which is regulated by three main storages: Pykes Creek, Melton Reservoir and Lake Merrimu.
- *Wimmera-Mallee Domestic and Stock Supply System.* Storages in the Grampian Ranges ensure farm water supplies over the riverless pastoral and cereal lands to the Murray. Without this supply, occupation of the region would be extremely hazardous. There are small areas of irrigation supplied from this system near Horsham and Murtoa.

**CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, VICTORIA 1983-84(a)**  
(Hectares)

Crops and Pastures	Method				Total
	Sprays	Furrows and/or Flood	Trickle (b)	Other and multiple methods	
Pure Lucerne . . . . .	4,431	7,636	n.a.	193	12,260
Other pastures (sown or native) . . . . .	36,297	408,844	n.a.	11,972	457,113
Cereals for all purposes . . . . .	4,803	24,532	n.a.	1,533	30,868
Tobacco . . . . .	2,062	53	n.a.	156	2,271
Vegetables for human consumption . . . . .	12,742	4,121	446	2,271	19,580
Fruit . . . . .	4,948	4,604	3,442	614	13,608
Grapevines . . . . .	3,412	10,075	629	191	14,307
All other crops . . . . .	1,768	3,083	55	176	5,082
<b>Total</b> . . . . .	<b>70,463</b>	<b>462,948</b>	<b>4,572</b>	<b>17,106</b>	<b>555,089</b>

(a) Collected every 3 years. (b) Includes micro-sprays.

**SOURCES OF IRRIGATION WATER, VICTORIA 1983-84(a)**

Source of supply	Area irrigated (hectares)	Percentage of total area irrigated %
Surface water		
from State irrigation schemes . . . . .	440,153	79
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (b) . . . . .	61,903	11
from farm dams . . . . .	27,401	5
<b>Total surface water</b> . . . . .	<b>529,457</b>	<b>95</b>
Underground water supply (e.g. bore, spear, well) (c) . . . . .	20,655	4
Town or country reticulated water supply . . . . .	4,967	1
<b>Total all water sources</b> . . . . .	<b>555,089</b>	<b>100</b>

(a) Collected every 3 years. (b) Includes regulated and unregulated streams (c) Naturally or artificially replenished.

**Future Programs**

Proposed capital works expenditure by the Rural Water Commission continues to place increasing importance on urban water services, waterway and floodplain management, environmental protection and water quality improvement.

Major provisions in the program include:

- (i) enlargement of Merrimu and Lance Creek Reservoirs, construction of Warrnambool Storage and rehabilitation of other headworks (notably Goulburn Weir);
- (ii) provision of urban water services, excluding Water Boards and Sewerage Authorities;
- (iii) provision of rural water supplies, including drainage, private diversions and salinity control works; and
- (iv) management of waterways and related lands, flood plain management and control of flood protection districts.

For more detailed information on Water Resources in Victoria see the chapter entitled *Water Resources* in the latest edition of the Victoria Year Book.

## Queensland

### Administration

The important primary industries of Queensland are subject to relatively frequent and serious losses by either drought or extensive flooding.

The right to the use and flow and to the control of water in watercourses, lakes, springs and artesian wells is vested in the Crown, and the Commissioner of Water Resources is authorised to take measures to conserve water and provide for its more equal distribution and beneficial use. Under the *Water Resources Administration Act 1978-1984*, he is required to (a) prepare a complete description of the natural water resources of the State, both surface and underground, (b) make and keep a record of all the natural water resources of the State, both surface and underground, (c) evaluate the present and future water requirements in the State, (d) plan the development of the water of the State, (e) take such steps as he thinks fit to protect the water resources of the State from anything detrimental to their quality or that results in or is likely to result in a diminution in their quantity, (f) investigate and survey any natural water resource, surface or underground, (g) co-ordinate the investigation, evaluation and development of plans for control of flood waters and mitigation of flood damage, (h) construct works for the conservation, replenishment, utilisation or distribution of the waters of the State, (i) manage water conservation, water supply and irrigation undertakings established under any Act of the State. As required under the *Water Act 1926-1983*, and the *Irrigation Act 1922-1983*, rights to underground and surface water are allocated and their use is controlled by a system of licensing of all artesian bores and sub-artesian bores in areas proclaimed by the Governor in Council and all conservation and use (other than for stock and domestic supplies) of flow in watercourses.

The Commissioner is required to prepare a co-ordinated program of work for the conservation, utilisation and distribution of water resources, and to make recommendations to the Government regarding the carrying out of works in this program. He is principally responsible for water conservation and supply works for rural purposes, including irrigation, stock and domestic supply. In planning such storages, economies to all users are accrued by providing, where possible, for dual or multi-purpose use of works for irrigation, rural, urban and industrial uses including power generation and mining purposes.

### Summary of schemes

Unlike other States, the greater part of the area irrigated in Queensland is by individual private pumping plants taking supply from streams or underground sources, spread widely through the State, rather than in constituted irrigation areas where supply is provided by channel systems delivering water to farms. Because of the predominance of irrigation by private diversion pumping, most of the storages are used to release water downstream to maintain supplies for such purposes.

**CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, QUEENSLAND 1983-84(a)**  
(Hectares)

<i>Crops and Pastures</i>	<i>Method</i>				<i>Total</i>
	<i>Sprays</i>	<i>Furrows and/or Flood</i>	<i>Trickle (b)</i>	<i>Other and multiple methods</i>	
Pure lucerne. . . . .	12,422	134	n.a.	768	13,324
Other pastures (sown or native). . . . .	14,953	3,099	n.a.	1,577	19,629
Grain sorghum . . . . .	3,848	5,832	n.a.	923	10,603
Other cereals for all purposes . . . . .	10,644	11,600	n.a.	1,395	23,639
Sugar cane . . . . .	50,661	43,517	467	9,353	103,998
Cotton . . . . .	294	29,082	116	606	30,098
Soy beans . . . . .	6,257	7,148	n.a.	992	14,397
Vegetables for human consumption . . . . .	14,783	3,103	949	1,332	20,167
Fruit (including grapevines) . . . . .	3,671	210	4,855	812	9,548
All other crops . . . . .	6,078	1,875	244	783	8,980
<b>Total. . . . .</b>	<b>123,611</b>	<b>105,600</b>	<b>6,631</b>	<b>18,541</b>	<b>254,383</b>

(a) Collected every 3 years. (b) Includes micro-sprays.

## SOURCES OF IRRIGATION WATER, QUEENSLAND 1983-84 (a)

<i>Source of supply</i>	<i>Area irrigated</i> (hectares)	<i>Percentage of total area irrigated</i> %
Surface water		
from State irrigation schemes . . . . .	62,615	25
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (b) . . . . .	46,580	18
from farm dams . . . . .	30,946	12
<i>Total surface water</i> . . . . .	<i>140,141</i>	<i>55</i>
Underground water supply (e.g. bore, spear, well) (c)	114,180	45
Town or country reticulated water supply . . . . .	62	—
<b>Total all water sources</b> . . . . .	<b>254,383</b>	<b>100</b>

(a) Collected every 3 years. (b) Includes regulated and unregulated streams.  
(c) Naturally or artificially replenished.

**Irrigation areas**

In 1983-84 about 32 per cent of the area under irrigation annually, i.e. some 79,624 hectares, is concentrated in seven Irrigation Areas constituted under the *Irrigation Act 1922-1983*, where the supply is generally reticulated by channel systems (by means of gravity or by pumping) from the storage. In addition, some supply is also provided from streams regulated by the storage.

<i>Irrigation areas</i>	<i>Comments</i>
Dawson Valley . . . . .	Around Theodore on Dawson River; cotton, graincrops and urban usage in Theodore and Moura.
Burdekin River . . . . .	Complex system of conservation, irrigation, industrial, urban and other uses; sugar cane, rice, seed and small crops; artificial recharging of underground water supplies from unregulated flows (Burdekin River).
Mareeba-Dimbulah . . . . .	Hinterland of Cairns; tobacco, rice, peanuts, coffee, seed and small crops and urban/hydro-electric uses; Tinaroo Falls Dam.
St George . . . . .	Balonne River; cotton, soya beans and cereals, and urban uses; Beardmore Dam.
Emerald . . . . .	Joint Federal-State undertaking based on State's largest storage—Fairbairn Dam; industrial and urban use, irrigation of cotton, soya beans and cereals.
Bundaberg . . . . .	Joint Federal-State undertaking; sugar and small crops and urban supplies for Bundaberg and adjacent shires; Fred Haigh Dam.
Eton . . . . .	Hinterland of Mackay; sugar cane; Kinchant Dam.

**Irrigation projects**

These are schemes established under the *Water Act 1926-1983*, where water from storage is released downstream to maintain adequate supplies for pumping under licence to land adjacent to the watercourse. Details of existing Irrigation Projects are set out in the accompanying table.

**Rural stock and domestic supplies**

Improvements to stock and domestic water supplies are assisted by Rural Water Supply Schemes and Bore Water Supply Areas (constituted under the *Water Act*). Investigation, design and administration of these schemes are carried out by the Queensland Water Resources Commission.

## IRRIGATION PROJECTS, QUEENSLAND 1983-84

Project	Authorised allocations				Actual use		
	Irrigation		Other uses (a)		Irrigation	Other uses	Estimated area irrigated
	No. of licenses	Allocation	No. of uses	allocation			
		'000m <sup>3</sup>		'000m <sup>3</sup>	'000m <sup>3</sup>	'000m <sup>3</sup>	hectares
Boyne River . . . . .	43	10,453	—	—	1,977	—	n.a.
Chinchilla Weir . . . . .	25	3,357	1	1,169	502	95	445
Dumaresq River . . . . .	177	55,742	5	1,280	3,576	1,055	6,751
Fitzroy River Barrage. . . . .	89	8,542	6	—	1,626	138	n.a.
Logan River . . . . .	145	10,377	4	2,024	2,186	908	3,400
Lower Lockyer. . . . .	195	11,818	—	—	6,906	—	2,560
Macintyre Brook . . . . .	145	17,847	1	350	2,937	315	3,000
Mary Valley . . . . .	245	17,106	3	4,014	5,499	4,022	3,860
Three Moon Creek . . . . .	133	14,300	9	688	6,924	530	3,500
Upper Burnett. . . . .	174	19,102	4	1,185	16,277	1,009	2,616
Upper Condamine. . . . .	69	13,424	3	3,328	4,634	1,587	7,650
Warrill Valley . . . . .	357	15,779	6	16,510	4,800	8,445	8,700
<b>Total . . . . .</b>	<b>1,797</b>	<b>197,847</b>	<b>42</b>	<b>30,548</b>	<b>57,844</b>	<b>18,104</b>	<b>42,482</b>

(a) Comprises industrial, urban, waterharvesting, rural water supply, rockwater and other uses.

### Underground water supplies

The availability of underground water, particularly the Great Artesian Basin, has played a major part in the development of the pastoral industry in Queensland. Underground water is also used extensively for irrigation on individual farms, particularly along the coastal fringe, and for domestic purposes. Some 45 per cent of the area irrigated in Queensland receives its supplies from underground sources. In accordance with the requirements of the *Water Resources Administration Act 1978-1984* the investigation of availability of underground water is being pursued by geological mapping, investigation drilling and hydro-geological assessment. The most important areas where water from this source is used for irrigation are the Burdekin Delta, Condamine Valley, Bundaberg, Lockyer Valley, Callide Valley and Pioneer Valley.

For more detailed information on Water Resources in Queensland see the chapter entitled *Land Settlement* in the latest edition of the Queensland Year Book.

## Western Australia

### Administration

The Minister for Water Resources administers the State operated irrigation schemes under the *Rights in Water and Irrigation Act, 1914-1978*. He is advised by an Irrigation Commission representing the local irrigationists and government, technical and financial branches. He also administers, under the *Country Areas Water Supply Act, 1947-1979*, the water supplies to most country towns and reticulated farmland. He also controls minor non-revenue producing supplies to stock routes and a few mines and agricultural areas with their associated communities. A small number of town supplies are administered by local boards under the *Water Boards Act, 1904-1979*, which provides a large degree of autonomy with ultimate Ministerial control.

### Irrigation

Irrigation schemes have been established by the Government on the coastal plain south of Perth in the Waroona, Harvey and Collie River and Preston Valley Irrigation Districts between Waroona and Donnybrook, the water being channelled from dams in the adjacent Darling Range. The success of dairying and stock raising and, to a lesser extent, vegetable growing, which have replaced citrus growing, has led to a gradual but substantial extension of irrigation areas in the south-west.

Irrigation areas at Carnarvon and on the Ord and Fitzroy Rivers in the Timor Sea Drainage Division are established in the north of the State.

Since the mid 1930s, a centre of tropical agriculture has been developed at Carnarvon, near the mouth of the Gascoyne River. Initially, the principal source of irrigation water for plantations was private pumping from the sands of the Gascoyne River. Overpumping by the growers however, resulted in salt intrusion into the fresh water aquifer. Government controls were introduced and a major groundwater supply scheme upstream of the irrigation area has

since been commissioned and provides 176 properties with approximately two-thirds of the irrigation water. The area specialises in growing bananas together with out of season vegetables for the Perth market. A tropical research station is maintained at Carnarvon by the Department of Agriculture.

The Ord River Irrigation Project in the Kimberley Division provides for the eventual development of an irrigation area of some 70,000 hectares of land, one third of which is in the Northern Territory. The first stage, in which water was supplied from the Kununurra Diversion Dam (capacity 98.7 mil. cubic metres) to 30 farms averaging 270 hectares plus a 970 hectare pilot farm was completed in 1965. Cotton was the principal crop, with grain sorghum and fodders for cattle fattening also important. Completion in 1971 of the Ord River Dam, which stores 5,720 mil. cubic metres in Lake Argyle, has allowed expansion of the area to be irrigated into the second stage. Five farms averaging 388 hectares were allocated in 1973. Since then, cotton has been phased out due to high off-farm costs and increasing costs of insect control specific to the cotton industry. The main crops being grown at present are rockmelons, sorghum, pumpkins, maize and soyabean. Other crops grown include watermelons, cucumbers, bananas, hay, peanuts and sunflowers. The State government has decided not to proceed with the establishment of a sugar industry, at this stage, as it would not be economic.

The Camballin Irrigation District on the Fitzroy River flood plain in the West Kimberleys is dependent on diverted river flows and a small volume of storage behind the diversion structures on the Fitzroy River and Uralla Creek. Grain and fodder sorghums are the main crops. Although a large area was developed for irrigation, the expansion of activity that was expected by the Australian Land and Cattle Company was cut short in February 1982 when this company was placed in the hands of a receiver-manager and in May 1982 the receiver placed the project under 'care and maintenance'. The project was acquired by AIL Holdings. That company will undertake a program of crop trials to determine the direction of future operations.

**CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, WESTERN AUSTRALIA  
1983-84(a)**  
(Hectares)

Crops and Pastures	Method				Total
	Sprays	Furrows and/or Flood	Trickle (b)	Other and multiple methods	
Pure Lucerne . . . . .	908	594	n.a.	101	1,603
Other pastures (sown or native) . . . . .	1,442	10,515	n.a.	372	12,329
Cereals for all purposes . . . . .	415	1,018	n.a.	22	1,455
Vegetables for human consumption . . . . .	2,963	491	191	487	4,132
Fruit . . . . .	1,489	405	1,571	265	3,730
Grapevines . . . . .	246	39	284	83	652
All other crops . . . . .	424	965	345	63	1,797
<b>Total . . . . .</b>	<b>7,887</b>	<b>14,027</b>	<b>2,391</b>	<b>1,393</b>	<b>25,698</b>

(a) Collected every 3 years.

(b) Includes micro-sprays.

**SOURCES OF IRRIGATION WATER, WESTERN AUSTRALIA 1983-84(a)**

Source of supply	Area irrigated	Percentage of total area irrigated
	(hectares)	%
Surface water		
from State irrigation schemes . . . . .	12,314	48
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (b) . . . . .	2,406	9
from farm dams . . . . .	4,618	18
Total surface water . . . . .	19,338	75
Underground water supply (e.g., bore, spear, well) (c)	5,653	22
Town or country reticulated water supply . . . . .	707	3
<b>Total all water sources . . . . .</b>	<b>25,698</b>	<b>100</b>

(a) Collected every 3 years.

(b) Includes regulated and unregulated streams.

(c) Naturally or artificially replenished.

### Country water supplies controlled by the Water Authority of Western Australia

Since 1947 enlargement and extensions of the Goldfields and Agricultural Water Supply and the development of the Great Southern Towns Water Supply have been carried out, mainly in accordance with a project known as the Modified Comprehensive Scheme. Under this scheme water has been supplied to towns and farms in the cereal and sheep districts of the State. Two years after the completion of the 1.7 million hectare scheme in 1961, an extension of 1.5 million hectares was agreed to with Federal-State funding.

*Goldfields and Agricultural Water Supply.* Water for the Eastern Goldfields is supplied by pipeline from Mundaring Reservoir in the Darling Range. The scheme now serves over 90 towns and 2.7 million hectares of farmland.

*West Pilbara Water Supply.* The West Pilbara Water Supply serves consumers in the towns of Dampier, Karratha, Roebourne, Wickham and Point Samson and industrial complexes at Dampier, Cape Lambert and the Burrup Peninsula. Water was previously supplied exclusively from the Millstream groundwater source. The Harding Dam, which was opened on 28 May 1985, will be operated in conjunction with the Millstream source. In this way the dam will provide 80% of total supply with Millstream providing drought security.

*Geraldton Regional Water Supply.* The Geraldton Regional Water Supply is supplied principally from the Allanooka groundwater source and a small amount from Wicherina (groundwater plus catchment). Towns supplied are: Geraldton, Denison, Mullewa, Dongara, Walkway, Narngulu and Eradu.

*Great Southern Towns Water Supply.* This scheme provides water to towns and localities from Wellington Dam to Narrogin and along the Great Southern Railway from Brookton to Tambellup, supplying 32 towns and 0.6 million hectares of farmland.

*Port Hedland Water Supply.* The Port Hedland Water Supply supplies Port Hedland, South Hedland and Wedgefield from the Yule River and De Grey groundwater sources.

*The Mandurah Regional Water Supply.* This scheme obtains supplies from the South Dandalup Dam and the Ravenswood groundwater source. Towns supplied are Mandurah, Yunderup, Furnissdale, Coodanup, Riverside Gardens and Ravenswood. Extension of the scheme to localities north and south of Mandurah is in progress.

MAJOR WATER SUPPLY SCHEMES  
COMPARATIVE PUMPING STATISTICS FOR PAST YEARS  
(millions of cubic metres)

	1980-81	1981-82	1982-83	1983-84	1984-85
Goldfields and Agricultural Areas Water Supply . . . . .	25.43	24.70	26.28	23.84	26.58
West Pilbara Water Supply . . . . .	9.81	10.50	11.46	11.00	10.77
Geraldton Regional Water Supply . . . . .	7.43	7.20	7.31	6.88	7.72
Great Southern Towns Water Supply . . . . .	6.19	5.88	6.72	5.72	6.87
Port Hedland Water Supply . . . . .	5.97	5.78	6.07	5.03	5.76
Mandurah Regional Water Supply . . . . .	1.94	2.11	2.40	2.85	3.05

*Local and Other Regional Water Supplies.* As well as the major water supply schemes above, water is also supplied by the Government from 7 other Regional Water Supply Schemes to 21 towns and from 104 local water supply schemes to 271 towns. The water comes from a variety of sources including underground, artificial catchments and stream flows.

*Aboriginal Communities Water Supplies.* Work has commenced on a program to upgrade the water services of remote Aboriginal communities. The program involves providing a town level of service to 40 communities and a support maintenance service to 29 of the 40 communities. Water for these supplies will come predominantly from underground sources, with only one community being supplied from a river flow and another from an artificial catchment. Investigations and design work has largely been completed and construction work has commenced. Services to 6 communities were completed in 1984-85.

### Underground water

Considerable use is made of groundwater by individual farmers, pastoralists, market gardeners and others, although the water quality varies from place to place and much of it is too saline for irrigation or even stock purposes. Artesian wells throughout the State and non-artesian wells within 'declared' areas must be licensed under the *Rights in Water and Irrigation Act, 1914-1978*. Industries also use groundwater in substantial quantities, especially



in the processing of titanium, iron and alumina, and this demand has intensified the search for groundwater.

For more detailed information on Water Resources in Western Australia see the chapter entitled *Land Tenure and Settlement, Water Supply and Sewerage* in the latest edition of the Western Australian Year Book.

## South Australia

### Administration

All major water resources and most public water supply schemes in South Australia are administered by the Engineering and Water Supply Department under the various statutes mentioned below.

- The *Waterworks Act*, 1932–1984, which empowers the Minister of Water Resources to impound or divert the water from any lake, watercourse or underground source for the purpose of establishing and maintaining public water supply schemes to serve proclaimed water districts throughout the State.

- The *Water Conservation Act*, 1935–1975, provides for the control of small reservoirs, bores, tanks, etc. established in remote areas as emergency water supplies or to assist local development.

- The *River Murray Waters Act*, 1983, which ratifies the River Murray Waters Agreement, and under which the Engineering and Water Supply Department operates and maintains Lake Victoria storage, nine weirs and locks downstream of Wentworth, N.S.W., and barrages at the river mouth.

- The *Water Resources Act*, 1976–1983, which came into force from 1 July 1976 and superseded the *Control of Waters Act*, 1919 and the *Underground Waters Preservation Act*, 1969, represents the culmination of the development of the Government's water resources policy involving the management of all aspects of water—surface and underground, quality and quantity. The Act provides for the control of diversions of surface waters from Proclaimed Watercourses and for the withdrawal of underground waters from Proclaimed Regions. Currently, the River Murray, Little Para River and Bolivar Effluent Channel are Proclaimed Watercourses, the Proclaimed Regions being the Northern Adelaide Plains, Padthaway and Angas-Bremer Irrigation Areas. The legislation provides for control over the construction or modification of most categories of wells over the whole State and for the abatement of pollution of all waters. It establishes a South Australian Water Resources Council and Regional Advisory Committees as vehicles for public participation in the water resources management process. Currently, Regional Committees operate in respect of the River Murray; the Northern Adelaide Plains, Little Para River and Bolivar Effluent Channel; Padthaway; the North Para River; the Arid Areas and the Angas-Bremer Irrigation Area. In addition, the Act provides for a Water Resources Appeal Tribunal to give individuals the opportunity to appeal against decisions of the Minister pursuant to the Act.

### Summary of schemes

South Australian irrigation commenced with an agreement involving the Chaffey brothers in 1887 whereby an area was made available for the establishment of certain irrigation works at Renmark. From this start, government, co-operative and private irrigation areas totalling more than 42,000 hectares have been developed in the South Australian section of the Murray Valley. The authority controlling River Murray irrigation is the Engineering and Water Supply Department which operates under policies determined by the Minister of Water Resources on advice of the S.A. Water Resources Council. The principal high land crops comprise citrus and stone fruits, and vines. The reclaimed swamps along the lower section of the Murray are used almost exclusively for pasture and fodder crops. Vegetable crops of various kinds are important in both types of irrigated lands.

Except for quantities held in various lock pools and natural lakes, no water from the Murray is stored within South Australia for irrigation purposes. Usage of the River is therefore planned on the basis of the minimum monthly flows to which South Australia is entitled under the River Murray Waters Agreement. This factor, plus the need to reserve water for city, town and rural water supply systems, has resulted in the expansion of irrigation from the River being rigidly controlled by the Government. In addition to irrigation from the River Murray there are considerable areas irrigated from underground sources by individual landholders in South Australia. The most important of these areas are the North Adelaide Plains (market gardens) and the Padthaway district of the south-eastern region (pastures, fodder, seed crops and vines).

**CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, SOUTH AUSTRALIA 1983-84(a)**  
(Hectares)

<i>Crops and Pastures</i>	<i>Method</i>				<i>Total</i>
	<i>Sprays</i>	<i>Furrows and/or Flood</i>	<i>Trickle (b)</i>	<i>Other and multiple methods</i>	
Pure Lucerne . . . . .	10,776	4,324	n.a.	466	15,566
Other Lucerne-based pastures . . . . .	2,889	1,126	n.a.	117	4,132
Other pastures (sown or native) . . . . .	11,652	14,229	n.a.	999	26,880
Cereals for all purposes . . . . .	1,585	807	n.a.	109	2,501
Vegetables for human consumption . . . . .	5,421	334	128	529	6,412
Fruit . . . . .	7,360	1,422	3,165	861	12,808
Grapevines . . . . .	5,190	6,538	3,698	1,085	16,511
All other crops . . . . .	1,179	877	32	55	2,143
<b>Total . . . . .</b>	<b>46,052</b>	<b>29,657</b>	<b>7,023</b>	<b>4,221</b>	<b>86,953</b>

(a) Collected every 3 years. (b) Includes micro-sprays.

**SOURCES OF IRRIGATION WATER, SOUTH AUSTRALIA 1983-84(a)**

<i>Source of supply</i>	<i>Area irrigated</i>	<i>Percentage of total area irrigated</i>
	(hectares)	%
Surface water—		
from State irrigation schemes . . . . .	16,849	19
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc.(b) . . . . .	19,481	23
from farm dams . . . . .	3,574	4
<i>Total surface water . . . . .</i>	<i>39,904</i>	<i>46</i>
Underground water supply (e.g., bore, spear, well)(c) . . . . .	44,360	51
Town or country reticulated water supply . . . . .	2,689	3
<b>Total all water sources . . . . .</b>	<b>86,953</b>	<b>100</b>

(a) Collected every 3 years. (b) Includes regulated and unregulated streams. (c) Naturally or artificially replenished.

### Adelaide Metropolitan Water Supply

In 1984-85, River Murray pipelines supplied 34 per cent of the total intake to the Metropolitan Adelaide Water Supply System, compared to 28 per cent for the previous year. The principal sources of supply for the nine storages in the Mt Lofty Ranges are the Rivers Onkaparinga, Torrens, South Para, Myponga and Little Para. For details on Adelaide Metropolitan Water Supply, see "Metropolitan Adelaide Water Resources Study", Engineering and Water Supply Department, June 1978.

### Country reticulation supplies

A number of reservoirs in the Barossa Ranges and other local sources are augmented by the Morgan-Whyalla, Swan Reach-Stockwell and Taillem Bend-Keith pipelines which provide River Murray water to extensive country areas. A network of branch mains provides the means of conveying water to numerous towns and large areas of farmlands.

Surface and underground resources have been developed to supply most country centres not covered by the larger schemes. Victor Harbor and adjoining south coast resort centres are supplied from reservoirs and the River Murray. A reservoir on Kangaroo Island supplies Kingscote and adjacent farmlands. Underground resources of the lower south-east supply all towns in the region, the city of Mount Gambier and nearby farmlands being reticulated from the well-known Blue Lake. At the far northern opal mining town of Coober Pedy a reverse osmosis desalination plant provides a potable supply from brackish groundwater. Other centres in the far north obtain supplies from the Great Artesian Basin. For details on underground water resources in South Australia see "Underground Water Resources of South Australia", Bulletin No. 48, Department of Mines and Energy, Geological Survey of South Australia, 1978.

### **South-eastern drainage**

A section of the South-East Coast Drainage Division extends into South Australia but has no co-ordinated drainage pattern to form a significant surface water resource. However, high rainfall in the area has led to the natural development of underground resources. Surplus water is not easily disposed of in the valleys and low range terrain, so drainage systems have been undertaken by the Government in co-operation with landholders. For further details see "Environmental Impact Study on the effects of Drainage in the South East of South Australia", South Eastern Drainage Board, June 1980.

### **Murray River Irrigation Areas**

Where irrigation water in excess of plant requirements has been applied, perched water tables develop. Rising to the level of tree roots, these cause the death of orchards from salination and water-logging. Most orchards and vineyards are now drained by plastic and tile drainage systems, thus restoring their health and productivity. Disposal of drainage water is achieved by pumping to basins on river flats where it is evaporated, or by discharge into the river when it is in flood—apart from those areas connected to the Noora Drainage Disposal Scheme. This scheme is the central feature in a \$25 million program of salinity control measures commenced in 1979. It involves the pumping of drainage water held in river-flat basins to a large evaporation basin at Noora, approximately 20 km east of Loxton and well out of the river valley.

Commissioning of the project occurred in 3 stages from 1982 to 1984, the latter being the same year that another salinity project, the Rufus River Groundwater Interception Scheme, was commissioned. This scheme involves the intercepting of saline seepage to Rufus River (which flows from Lake Victoria to the Murray) and pumping it to an evaporation basin east of Lake Victoria and outside the river valley.

Work is continuing on other salinity control measures, including further engineering works, and improved irrigation and river regulation practices.

For more detailed information on Water Resources in South Australia see the chapter entitled *Physical Development* in the latest edition of the South Australian Year Book.

## **Tasmania**

### **Main purposes of water conservation and utilisation**

Because of the generally more adequate rainfall in Tasmania, scarcity of water is not such a problem as it is in most mainland areas, though not all streams are permanently flowing. The only large-scale conservation by reservoirs is for hydro-electric power generation, but there are some moderately-sized dams built by mining and industrial interests and by municipal authorities for town water supplies. 'Run of the river' schemes are quite adequate for assured supply in many municipalities. The main supply for Hobart and adjacent municipalities originates from a 'run of the river' scheme based on the Derwent River. The river is controlled in its upper reaches by eight dams, built for hydro-electric power generation, and these tend to stabilise river flow.

Until a few years ago irrigated areas were negligible except for long established hop fields, but there is a rapidly expanding use of spray irrigation on orchards, pastures, potatoes, beans and peas. Until recent years there has been almost complete dependence on natural stream flows, but the need for some regulating storages has become apparent. Increasingly, farmers are constructing storages of their own and the extension of this practice is foreseen as the logical solution in most areas, as valleys are narrow and steep sided. Single large reservoirs cannot economically serve large areas of suitable land, as nearly every valley is separated from others by pronounced hills, prohibiting the construction of cross-country channels.

Underground water suitable for stock, minor irrigation works and domestic use is exploited in the consolidated rocks of southern, midlands and north-western Tasmania. In the south and midlands, nearly all groundwater is obtained from Permian and Triassic rocks. In the north-west, water is recovered from a variety of rocks ranging from Precambrian dolomites, quartzites and schists to Tertiary basalts and Quaternary sands. The highest yields are obtained from the dolomites and the basalts. In the central north and north-east, unconsolidated Tertiary clays and gravels yield water of variable quality. In some coastal areas, notably King and Flinders Islands, water is obtained from aeolian sands.

The Mines Department is charged with the investigation of underground water resources. There is a great reserve of untapped permanent streams in the western half of the State, which is largely unsettled. The State's largest rivers discharge in the west, but diversion to

the eastern half of the watersheds is not regarded as practicable. The Hydro-Electric Commission, however, has planned for the future development of four storage dams in the West Coast region on the Pieman, Murchison and Mackintosh rivers.

### Administration

In Tasmania, water supply was once exclusively the responsibility of local government authorities, but three statutory authorities, the Hobart Regional Water Board, the Rivers and Water Supply Commission and the North West Regional Water Authority, now operate bulk supply schemes, piping water for distribution by the local government authorities in the Hobart, Launceston and N.W. Coast regions, and directly to certain industrial consumers. The Board is responsible for bulk supplies to the Hobart, Clarence, Glenorchy to Kingborough, Brighton, Green Ponds, New Norfolk, Richmond and Sorell local government areas, while the Commission exercises a general control over the utilisation of the State's water resources and has specific functions in relation to local government authority water, sewerage and drainage schemes. The Authority controls the supply of water to the municipalities of Circular Head, Wynyard, Penguin, Ulverstone, Devonport, Latrobe and Kentish.

*Rivers and Water Supply Commission.* The Commission is empowered by the *Water Act 1957* to take water at streams and lakes, or to issue others with licences to do so; licensing covers supply to specific industries and municipalities as well as for irrigation. The Commission is concerned with drainage trusts' operations, river improvements (including repairs after flood damage), stream gauging, its own regional water schemes, and with water supply, sewerage and drainage of towns. It operates in a similar manner to the Hobart Regional Water Board in controlling the water schemes serving the East Tamar region (North Esk Regional Water Supply), the West Tamar area (West Tamar Water Supply) and the Prosser River Scheme, which was originally constructed to supply water to a sodium alginate industry at Louisville near Orford and to supplement the water supply of the township of Orford. The sodium alginate industry ceased production in December 1973. The North Esk Regional Water Supply was constructed to meet industrial requirements of the alumina refinery and other industries at Bell Bay, and to provide bulk supplies to surrounding municipalities on the eastern bank of the River Tamar and has since been augmented by the construction of a dam on the Curries River to supply the northern end of the Tamar Valley. The West Tamar Water Supply was constructed primarily to meet domestic requirements of urban areas in the Beaconsfield municipality. The local government authorities retain primary responsibility for reticulation and sale to consumers, except to certain industrial users.

In municipalities not serviced by the Hobart Regional Water Board, the Rivers and Water Supply Commission or the North West Regional Water Authority, the supply of water is a function of the local municipal council. Where the construction of water and sewerage schemes is beyond the financial capacity of a local government authority, or if it requires assistance to pay for water supplied from regional schemes, the Minister may approve the payment of a subsidy.

### Irrigation

The Cressy-Longford Irrigation Scheme officially opened in 1974 and was the first major State irrigation project to be established in Tasmania. The source of supply is the tailrace of the Poatina Hydro-Electric Power Station from which up to 160 thousand cubic metres per day may be available to farmers inside the Irrigation District and along the Liffey River downstream from Pitts Land.

There are some 10,000 hectares fit for irrigation within the Irrigation District, half of which may be watered by gravity. The Scheme serves some seventy-two farms within the Irrigation District and another thirty may be supplied on the Liffey River and on the fringes of the Irrigation District.

Besides the Cressy-Longford Irrigation Scheme which is operated by the Rivers and Water Supply Commission, the following local bodies supply water for irrigation or inter-alia exercise control over its availability: the Lawrenny Water Trust on the Ouse River, the Clyde Water Trust on the Clyde River, the Macquarie Water Trust on the Macquarie River at Ross and the Campbell Town Council on the Elizabeth River.

The major portion of the 39,905 hectares irrigated in the State in 1983-84 were watered by private schemes, either by pumping directly from unregulated streams or from on farm storages. Pasture still predominates as the main crop watered but potatoes and other vegetables amount to 33 per cent of the total area irrigated.

**CROPS AND PASTURES IRRIGATED, BY METHOD OF IRRIGATION, TASMANIA 1983-84 (a)**  
(Hectares)

<i>Crops and Pastures</i>	<i>Method</i>				<i>Total</i>
	<i>Sprays</i>	<i>Furrows and/or Flood</i>	<i>Trickle (b)</i>	<i>Other and multiple methods</i>	
Pure Lucerne . . . . .	873	61	n.a.	23	957
Other pastures (sown or native) . . . . .	8,901	7,933	n.a.	715	17,549
Cereals for all purposes . . . . .	1,453	101	n.a.	114	1,668
Potatoes . . . . .	3,915	51	7	772	4,745
Other vegetables for human consumption . . . . .	7,129	45	16	1,212	8,402
Fruit . . . . .	1,120	53	843	150	2,166
All other crops . . . . .	3,761	283	5	369	4,418
<b>Total . . . . .</b>	<b>27,152</b>	<b>8,527</b>	<b>871</b>	<b>3,355</b>	<b>39,905</b>

(a) Collected every 3 years. (b) Includes micro-sprays.

**SOURCES OF IRRIGATION WATER, TASMANIA 1983-84 (a)**

<i>Source of supply</i>	<i>Area irrigated</i>	<i>Percentage of total area irrigated</i>
	(hectares)	%
Surface water		
from State irrigation schemes . . . . .	2,377	6
from other schemes (including private group schemes)—		
from rivers, creeks, lakes, etc. (b) . . . . .	15,701	39
from farm dams . . . . .	19,766	50
<i>Total surface water . . . . .</i>	<i>37,844</i>	<i>95</i>
Underground water supply (e.g., bore, spear, well) (c)	1,658	4
Town or country reticulated water supply . . . . .	403	1
<b>Total all water sources . . . . .</b>	<b>39,905</b>	<b>100</b>

(a) Collected every 3 years. (b) Includes regulated and unregulated streams. (c) Naturally or artificially replenished.

For more detailed information on Water Resources in Tasmania see the chapter entitled *Local Government* in the latest edition of the Tasmanian Year Book.

## Northern Territory

### Administration

Under the Northern Territory *Control of Waters Act 1981*, control of natural waters is vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases). The diversion of water is prohibited except under prescribed conditions. The Act requires that drilling for ground water be carried out only by drillers who are registered under the Act. Registered drillers are required to provide the Government with information on bores drilled, including the location, depth and size of bore, strata encountered and water produced. In particular areas, described as Water Control Districts, where stricter control is necessary, the construction or use of a well or water bore without a permit can be prohibited.

Under the *Water Supplies Development Act 1960*, any landholder engaged in pastoral or agricultural production may seek information or advice from the Commissioner of Water Development who is appointed under the Act. The landholder may also apply for an advance towards the cost of work proposed to be carried out. The Act also provides for a refund to the landholder of the cost of drilling an unsuccessful bore where the landholder has applied to the Commissioner for advice on its construction and has carried out all drilling operations in accordance with advice given.

Northern Territory water legislation is under review. It is proposed that the above mentioned Acts will be amalgamated into a new 'Water Act' in 1986.

The Water Resources Division of the Department of Mines and Energy is responsible for the assessment, planning and management of surface and groundwater resources throughout the Northern Territory. It carries out systematic stream gauging, the collection of data relating to the quantity and quality of surface and groundwater and flood prevention and control. It is involved in water pollution studies and control, and carries out environmental assessments of water and related developments. It also provides an advisory service under the *Water Supplies Development Act 1960* and administers permits under the *Control of Waters Act 1981*.

The Water Division of the Department of Transport and Works is responsible for the operation, planning and management of town and community water supplies throughout the Northern Territory.

#### **Surface water**

Hydrological investigations undertaken in the Northern Territory as part of the National Water Resources Assessment Program are carried out and the data published by the Water Resources Division. The program includes base stream gauging stations and pluviographs (automatic rainfall recorders).

#### **Groundwater**

For information on Northern Territory groundwater resources see the Department of Resources and Energy publication *Australia's Groundwater Resources, 1983*, and the Australian Water Resources Council's publication *Groundwater Resources of Australia, 1972 and Review of Australia's Water Resources, 1975*.

Of 17,596 bores and wells registered in the Territory to 30 June 1985, 30 per cent were for pastoral use 25 per cent were investigation bores, 25 per cent served town and domestic supplies, 3.5 per cent were for agriculture, 7 per cent were used for mining and the remaining 9.5 per cent for various other uses.

#### **Water supplies**

The largest water conservation projects in the Territory are the Darwin River Dam (259.0 million cubic metres) and the Manton Dam (15.7 million cubic metres) which both serve Darwin with a reticulated water supply. Groundwater from McMinns Lagoon area can be used to augment supply.

Most other towns and communities, including Alice Springs, Tennant Creek, Jabiru and Nhulunbuy, are supplied from groundwater.

Irrigation in the Territory is not extensive, being confined to isolated locations near Darwin, Adelaide River, Daly River, Katherine, Ti Tree and Alice Springs for the purpose of growing fruit, vegetables, fodder crops, pastures and some dairying. Most of this irrigation is carried out using bore water.

There is increasing demand for water resources assessment studies and assistance for relatively small irrigation projects.

### **Australian Capital Territory**

#### **Surface water**

Surface water storages supplying Canberra (population about 250,000) and the city of Queanbeyan (population about 21,000) are located to the south-west and south-east. The storages to the south-west are in the heavily timbered, mountainous Cotter River catchment within the A.C.T., the storages being Corin Dam (75.5 million cubic metres), Bendora Dam (10.7 million cubic metres) and Cotter Dam (4.7 million cubic metres). The storage to the south-east in New South Wales in the Queanbeyan River catchment (over which the Commonwealth has permanent water rights) on the western slopes of the Great Dividing Range is the Googong Dam (125 million cubic metres).

The existing storages on the Cotter and Queanbeyan rivers have an ultimate combined capacity to serve 450,000 persons. The remaining water resource within the A.C.T. is the Gudgenby River which is at present not utilised but has the potential to serve approximately 200,000 persons.

The A.C.T. water supply system is operated and maintained by the Department of Housing and Construction. This Department operates a network of stream gauging stations in the A.C.T. to monitor surface water resources. A number of the gauging stations are provided with telemeters which enable the Department to provide a flood warning system in association with the Bureau of Meteorology.

**Groundwater**

Groundwater in the A.C.T. and environs occurs mainly in fractures in crystalline rock such as granite and volcanic rocks; in folded and fractured slate; and, rarely, in solution cavities in limestone. Alluvial aquifers of significance are restricted to the Lake George basin and small areas along mature sections of the Molonglo and Murrumbidgee rivers. Groundwater has been used in the past by most primary producers to augment surface storage. Groundwater production bores in the A.C.T. have yields ranging between about 0.4 and 20 cubic metres per hour; 3 cubic metres per hour is about the average yield. However, many farm bores have fallen into disuse as a result of the Government's resumption of freehold land within the A.C.T., and because of the rapid expansion of urban growth. The Bureau of Mineral Resources has provided a bore-siting, groundwater-quality and yield-prediction service in and around the A.C.T. since the early 1950s and until 1978 maintained a network of 48 observation bores which had been monitored regularly for up to 25 years. Periodic monitoring of the bores recommenced in 1980 as a consequence of greatly increased demand for the Bureau's rural bore siting services during the drought. Data are now being collected on groundwater occurrences within the A.C.T. and environs for preparation by the Bureau of a 1:100,000 scale hydrogeologic map.

Control of irrigation and farm water supplies is exercised by the Department of Territories. The Bureau of Mineral Resources of the Department of Resources and Energy provides technical advice to landholders and drilling contractors on groundwater and, occasionally, on runoff.

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# CHAPTER 16

## MINERAL INDUSTRY

### GENERAL

#### Geology and mineral resources

##### General geology

Most of the western and central part of the Australian continent consists of basement rocks of Precambrian age. Younger Palaeozoic rocks, mostly of geosynclinal origin, form a discontinuous belt several hundred kilometres wide extending from north Queensland to Tasmania. Mesozoic platform sediments form a broad zone separating the Palaeozoic and Precambrian rocks and extending from the Gulf of Carpentaria to central New South Wales. Cainozoic rocks occur mainly in Victoria, south-western New South Wales and southern South Australia, and as residual basalt cappings over extensive areas of the Palaeozoic rocks of eastern Australia.

##### Economic geology

Minerals of economic significance occur throughout Australia, their geological age ranging from Precambrian to Recent.<sup>3</sup> Many of the large deposits such as those at Broken Hill (N.S.W.), Mount Isa (Qld), the Kalgoorlie and Pilbara regions of W.A. and the Alligator Rivers area of N.T. are Precambrian in age. In eastern Australia the major deposits such as the Elura, Cobar, Woodlawn and Rosebery base-metal deposits and most of the black coal deposits, are Palaeozoic in age. The black coals of the Moreton district of Queensland, northeast New South Wales and Leigh Creek, S.A. are of Mesozoic age. Deposits formed in Tertiary times include the brown coal in Victoria, the bauxites of Weipa (Qld), Gove (N.T.) and the Darling Range (W.A.) and the nickeliferous laterites at Greenvale (Qld).

##### Mineral resources

Australia is self-sufficient in most minerals of economic importance (and much more than self-sufficient in some). Known adequate reserves of major minerals with production sufficient for domestic demand and exports include aluminium (bauxite and alumina), black coal, copper, gold, iron ore, lead, natural gas, nickel, salt, silver, tin, tungsten, uranium and zinc. Reserves sufficient for domestic demand include clays (except light grade china clay), brown coal and dolomite.

For further details of principal Australian mineral deposits, and notes on principal mineral resources, see Year Book No. 61, pages 925-932 and the Australian Mineral Industry Quarterly and Annual Reviews.

#### Administration

All mineral rights in Australia are vested in the Crown except those on land which was granted before the Crown began to reserve mineral rights. In practice, these private mineral rights are important only in the New South Wales coalfields. In the States, these rights are held by the State Governments. On 1 July 1980, executive authority with respect to mining and minerals except in relation to certain prescribed substances within the meaning of the Atomic Energy Act (principally uranium) was transferred from the Commonwealth Government to the Northern Territory Government. Private mineral rights in the Australian Capital Territory are vested in the Commonwealth Government. The Commonwealth Government is able also to influence overall development and production activity in the mineral industry by virtue of its statutory powers with respect to international trade, customs and excise, taxation and loan raisings. Certain specially-formed bodies such as the Joint Coal Board and the Australian Atomic Energy Commission have been given administrative responsibility in defined areas.



### Mineral exploration and development

*Onshore.* Each State or Territory has its own mining Acts or Ordinances and regulations governing the prospecting for and working of mineral deposits. These Acts and regulations, although similar in principle are different in detail. They all make provision for a miner's right to prospect and for small mining leases for mineral production. The principles embodied were established many years ago when mining operations were generally small scale and labour-intensive. Although amendments have been enacted to modernise the legislation, it is generally inadequate for the large-scale capital-intensive operations often involved with modern mineral development. For this reason a large enterprise may take the course of acquiring mining titles by negotiations with the appropriate Minister for Mines and having the agreed terms and conditions embodied in an Act of the State Parliament. This method of acquisition has been used in several cases where the leasing company undertook an obligation (such as the erection of a large treatment works) in return for leases over large areas for a long period, and has become more common in recent years (e.g. iron ore in Western Australia, coal and bauxite in Queensland, bauxite in the Northern Territory). Mining legislation enacted in recent years is simpler and more suited to modern conditions.

As a result of the introduction of large-scale modern prospecting methods (particularly airborne prospecting), small prospecting areas were found to be unsuitable in some instances, and steps have been taken in the States and Territories to ensure the availability of large areas for prospecting by interested persons. Large areas may be made available by provision within the Mining Acts or Ordinances for the issue of authorities to prospect over an area defined by a written agreement which also sets out provisions as to the amount of money to be spent, methods of prospecting, tenure of the agreement, etc.

The tenure of such areas is limited (usually to one or two years) and, if renewed for a further period, is only over an area selected from the larger area (usually 50 per cent) as a result of work done during the life of the initial agreement. It does not give the holder any rights over, or authority to prospect on, land already held under a mining title within the agreed area. Unless specifically stated in an agreement, the discovery of minerals, whether inside or outside an area covered by an authority to prospect, gives the discoverer no legal rights except the right to apply for a mining lease over the area in which the discovery was made. Suitable prospects are converted to mining tenements by making application for lease under the appropriate mining Act.

*Offshore.* Following the enactment of the *Seas and Submerged Lands Act 1973* the High Court confirmed that the Commonwealth has sovereignty over the territorial sea and sovereign rights over the resources of the whole of Australia's continental shelf. However, in the offshore constitutional settlement between the Commonwealth and the States reached in June 1979, it was agreed that responsibility for mining within the outer boundary of the 3 mile territorial sea should lie with the States, while the Commonwealth should have responsibility for areas beyond.

*The Minerals (Submerged Lands) Act 1981* passed by the Commonwealth Parliament in June 1981 follows the scheme of the offshore petroleum legislation amendments passed in 1980 and provides for Joint Commonwealth/State Authorities to be responsible for major matters under the legislation with the States being responsible for day-to-day administration. The legislation will be proclaimed to come into effect when complementary State legislation in respect of the 3 mile territorial sea is enacted. In the meantime administration of offshore mining is carried out under the States' onshore mining legislation on an interim basis.

The mining code under the new legislation provides for a two-stage system of titles: the exploration permit, which covers all forms of exploration, and the production licence, which covers development.

### Petroleum exploration and development

*Onshore.* In Australia, all petroleum is the property of the Crown. Consequently, full control of petroleum mining rights is vested in the Government or Administration of each State or Territory. Any company, organisation or individual proposing to undertake petroleum exploration or development must first satisfy the Government concerned that the necessary financial and technological resources are available to carry out the operation.

There are three main types of petroleum title:

- (i) the exploration title, where the holders are typically given exclusive rights over the area to conduct petroleum exploration, including the drilling and testing of wells;
- (ii) the production title, which is required for the engagement in commercial production of petroleum and gives the holder the right to produce and sell the petroleum subject

to the payment of a royalty calculated as a fixed percentage of the well-head value of the petroleum produced; and

- (iii) the retention licence recently enacted in the Northern Territory, covering onshore petroleum exploration and production under the *Petroleum Act 1984* and is intended to allow tenure over currently non-commercial discoveries.

Royalty arrangements vary from State to State. All States and the Northern Territory have calculated royalties derived from onshore production as a percentage of the derived well head value of all petroleum production. However, in June 1985, the Commonwealth and Western Australian Governments reached agreement to replace Commonwealth excises on LPG and crude oil and State ad valorem royalty with a Resource Rent royalty. Revenue will be shared between the Commonwealth and State Governments on a 75-25 basis.

*Offshore.* In the offshore constitutional settlement between the Commonwealth and the States reached in June 1979, it was agreed that, as in the case of mining for other minerals, responsibility for administering petroleum exploration and production within the outer boundary of the 3 mile territorial sea would be a State responsibility, while the Commonwealth would have responsibility for the continental shelf beyond the 3 mile territorial sea.

Amendments to the *Petroleum (Submerged Lands) Act 1967* passed by the Commonwealth Parliament in May 1980 and proclaimed on 14 February 1983, provide for a Joint Authority for the adjacent area of each State (beyond the 3 mile territorial sea limit) consisting of the Commonwealth Minister and the State Minister. The Joint Authorities are concerned with major matters arising under the legislation, and in the case of disagreement the view of the Commonwealth Minister will prevail. Day-to-day administration will continue to be in the hands of the State Minister as the Designated Authority and State officials.

The mining code applicable under the legislation provides for a two-stage system of titles: the exploration permit, which covers all forms of exploration including drilling, and the production licence, which covers development and production. The sharing of royalty between the State and the Commonwealth Governments is to continue on a 60-40 basis, and any override royalty payments will continue to be retained by the States. The offshore constitutional settlement and the operation of Commonwealth and State offshore petroleum legislation are being reviewed by the Commonwealth Government. Decisions on the outcome of the review and details of any changes are expected to be known in 1985.

On 27 June 1984, the Minister for Resources and Energy and the Treasurer announced final details of a resource rent tax to apply to offshore 'greenfields' petroleum projects from 1 July 1984. The resource rent tax is intended to replace royalties and excise and will constitute a deduction for company tax purposes. The *Petroleum (Submerged Lands) (Royalty) Amendment Act 1985* and the *Petroleum (Submerged Lands) Amendments Act 1985* exempt production in the Territory of Ashmore and Cartier Islands Adjacent Area from royalties. This exemption from royalties was made in advance of the overall Resource Rent Tax legislation to assist the developers of the Jabiru project and to demonstrate the Government's commitment to major and positive changes in the fiscal regime applying to 'greenfields' offshore projects.

### **Mineral royalties**

The collection by governments of royalties for the production of minerals within their area of authority is an internationally-accepted practice. In Australia, the responsibility for mineral royalties is largely a State concern, and all States currently collect some form of mineral royalty payments.

In recent years there has been an important basic change in the system of establishing royalty commitments, and it is now quite common for State Governments to negotiate special royalty rates with companies which are seeking mineral leases for large scale developments. These royalty rates may vary, depending on whether production is for export or for domestic processing. The rates for a particular mineral may also vary between producers. Important examples of this type of royalty agreement are the iron ore development agreements in Western Australia and coal development agreements in Queensland. Mineral royalties received by Governments in recent years are shown in the following table.

## MINERAL ROYALTY RECEIPTS: GOVERNMENTS

	(\$'000)					
	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
New South Wales (a) . . . . .	35,879	86,938	116,682	88,186	105,403	110,100
Victoria (b) (c) . . . . .	60,111	90,554	118,611	108,782	124,861	180,585
Queensland (a) . . . . .	53,638	73,473	73,274	81,382	89,703	107,579
South Australia . . . . .	4,541	5,869	7,312	8,811	9,321	14,172
Western Australia . . . . .	57,810	66,712	78,341	81,330	102,454	179,355
Tasmania . . . . .	2,193	5,261	3,557	2,209	2,082	2,137
Northern Territory (d) . . . . .	1,256	2,551	5,666	3,020	2,934	3,963
Commonwealth Government (c) . . . . .	28,031	43,337	57,319	56,580	73,333	89,853
<b>Total . . . . .</b>	<b>243,459</b>	<b>374,695</b>	<b>460,762</b>	<b>430,300</b>	<b>510,091</b>	<b>688,744</b>

(a) Includes royalties on sand and gravel from Crown lands. (b) Includes royalties on brown coal paid by State Electricity Commission. (c) Includes royalties received under the *Petroleum (Submerged Lands) (Royalty) Act 1967-68*. (d) Excludes the mining royalties paid into Aboriginal Benefits trust fund prior to 1978-79.

### Control of Exports

The Commonwealth Government exercises control over the export of certain minerals and metals. The legislative basis for export controls is contained in Regulations 9 and 11 of the Customs (Prohibited Exports) Regulations. These regulations prohibit the export of certain minerals and metals and of hydrocarbons and nuclear-sensitive material, unless permission is granted by the Minister for Trade or an authorised person.

Export controls serve different objectives. Among other things, they are used to ensure that:

- (i) prices negotiated by Australian suppliers are in line with the market and other terms and conditions of sales contracts are reasonable;
- (ii) Australia is able to meet its international obligations e.g. under the International Tin Agreement;
- (iii) exports of uranium and nuclear materials are consistent with Australia's international obligations;
- (iv) domestic requirements of petroleum and petroleum products are met before exports occur;
- (v) supplies of copper scrap and copper alloy scrap are reserved for local industry; and
- (vi) the provisions of the Environment Protection (Impact of Proposals) Act and the Australian Heritage Commission Act are taken into account.

Close control is exercised in respect of alumina, bauxite, coal (including lignite), iron ore, petroleum and petroleum products, primary tin, uranium and other materials of nuclear significance. Exporters are required to consult with the Department prior to the negotiation of contracts for sale of alumina, bauxite and coal and Determinations are made in relation to the negotiation of contracts for the sale of uranium.

Concerning the remaining minerals and metals subject to Regulations 9 and 11:

- (i) in relation to ores, concentrates, matte and oxides of copper, lead, manganese, nickel, tungsten and zinc, blister and refined copper, lead bullion and salt: exporters, on application, are given automatic approval to export expected shipments over a twelve-month period;
- (ii) in respect of mineral sands, approvals to export are freely issued except where the Commonwealth considers there are environmental reasons which would make such exports undesirable; in the case of monazite and xenotime, however, there are additional requirements to be met in relation to the Government's nuclear safeguards policy before export approval can be given; exports of copper scrap and copper alloy scrap are embargoed, and quotas apply to secondary copper ingots and other basic shapes made from scrap material.

No other minerals are subject to control.

The Government continues to review export controls in the light of changing circumstances.

### Joint Coal Board

The Joint Coal Board was established in 1946 under joint legislation of the Commonwealth Government and of the State of New South Wales to carry out special administrative functions in regard to the New South Wales black coal mining industry. In summary, the Board's functions are:

- (i) to ensure that coal is produced in the State of New South Wales in such quantities and with such regularity as will meet requirements throughout Australia and in trade

- with other countries;
- (ii) to ensure that the coal resources of the State are conserved, developed, worked and used to the best advantage in the public interest;
  - (iii) to ensure that coal produced in the State is distributed and used in such manner, quantities, classes and grades, and at such prices as are calculated best to serve the public interest and secure the economical use of coal and the maintenance of essential services and industrial activities; and
  - (iv) to promote the welfare of workers engaged in the coal industry in the State.

### Government assistance

The Commonwealth Government and the various State Governments provide assistance to the mineral industry in a variety of ways. The main forms of assistance are discussed on the following pages.

#### Commonwealth Government assistance

Assistance provided by the Commonwealth Government takes the form of income taxation concessions, subsidies, bounties, and technical assistance, mainly through the work of the Bureau of Mineral Resources, Geology and Geophysics (BMR) and the Commonwealth Scientific and Industrial Research Organization (CSIRO) as well as through the National Energy Research, Development and Demonstration Program.

*Income taxation concessions as at 30 June 1985.* Income derived from mining principally for gold in Australia is exempt from tax. The exemption is also available in respect of income derived from mining principally for gold and copper if the value of the gold obtained is not less than 40 per cent of the value of the total output.

Special deductions for capital expenditure incurred in prospecting and mining for petroleum (including natural gas) are allowable to a petroleum mining enterprise engaged in these operations in Australia. Capital expenditure allowable to petroleum mining enterprises includes, broadly, the costs of exploratory surveys, drilling and well-head plant; plant for the liquefaction of natural gas; access roads; and housing and welfare. The enterprise is entitled to these special deductions against income from any source. While the special deductions for prospecting expenditure are deductible immediately against the net income of the enterprise, the deductions for capital expenditure on mining are allowable over the life of the oil or gas field or over ten years, whichever is the lesser, on a straight line basis.

An enterprise mining or prospecting for minerals other than petroleum and gold may also be allowed special deductions for capital expenditure. Broadly, allowable capital expenditure includes expenditure on exploration and prospecting; preparation of a site for extractive mining operations; buildings; other improvements and plant necessary for those operations; access roads; certain treatment plant; and housing and welfare.

The allowable capital expenditure of a general mining enterprise, other than costs of exploration, may be deducted against income from any source over the life of the mine or over ten years, whichever is the lesser, on a straight line basis. Expenditure incurred by a general mining enterprise in exploring for minerals is deductible immediately against the net income of the enterprise from any source.

Annual deductions for depreciation on petroleum mining plant or general mining plant may be allowed in lieu of spreading the cost over the life of the oil field or mine. The cost of exploration plant may also be deducted under the depreciation provisions of the law. The investment allowance scheme may permit a deduction at the rate of 18 per cent of the cost of certain new plant.

Special deductions are allowable for capital expenditure incurred on certain transport facilities for use in Australia primarily and principally, for the transport of raw minerals (other than petroleum or gold) and certain specified products obtained from the processing of such minerals, or for transporting petroleum between the oil or gas field and a refinery or other terminal. The special deductions apply to expenditure incurred on a railway, road, pipeline or similar transport facility and on certain port facilities or other facilities for ships. Allowable expenditure on transport facilities is deductible in equal annual instalments over a period of ten or twenty years at the option of the mining enterprise.

An income tax rebate of 27 cents for each dollar of share capital subscribed may be available to shareholders of petroleum mining companies exploring or mining for petroleum in Australia, including offshore areas, where those companies lodge appropriate declarations with the Commissioner of Taxation in respect of the moneys subscribed. By lodging those

declarations, certifying that the capital subscriptions have been, or will be, spent on eligible outgoings within a specified period, the petroleum mining companies forgo deductions to which they might otherwise be entitled for capital expenditure.

*Payments to producers and importers of phosphate fertilizers.* The *Phosphate Fertilizers Subsidy Act 1963* provides for a subsidy to be paid on phosphatic substances produced in Australia or imported and sold for use in Australia as a fertilizer. Phosphatic substances used as a supplement to stock food are also regarded as being used as a fertilizer. Subsidy is payable at the rate of \$12 per tonne in respect of superphosphate where the available phosphorus content is not less than 8.5 per cent or more than 8.9 per cent by weight. Outside this range, subsidy is payable at \$138 per tonne of the available phosphorus content of the substance. The intention of the Act is to assist consumers of phosphate fertilizers (primary producers). The Act expires on 30 June 1986.

*Payments to producers and importers of nitrogenous fertilizers.* The *Nitrogenous Fertilizers Subsidy Act 1966* provides for a subsidy to be paid on inorganic nitrogenous substances produced in Australia or imported and sold for use in Australia as a fertilizer. Nitrogenous substances used as a supplement to stock food are also regarded as being used as a fertilizer. Subsidy is payable at the rate of \$20 per tonne of the nitrogen content of which the goods consist. The intention of the Act is to assist consumers of nitrogenous fertilizers (primary producers). The Act expires on 30 June 1986.

*Bureau of Mineral Resources, Geology and Geophysics.* The role of BMR is:

- (i) to develop an integrated, comprehensive, scientific understanding of the geology of the Australian continent, the Australian offshore area and the Australian Antarctic Territory, as a basis for minerals exploration; this to be done where appropriate in co-operation with State Geological Surveys and other relevant organisations and having regard to priorities for the search for minerals approved by the Minister for Resources and Energy;
- (ii) to be the primary national source of geoscience data and to publish and provide information; and
- (iii) to undertake mineral resource assessments in accordance with programs and priorities approved by the Minister for Resources and Energy with the advice of the BMR.

At 31 August 1985, 550 officers were employed at the BMR, this included 172 professional officers (geologists, geophysicists, chemists, engineers, and mineral economists etc.), 78 research scientists, four chief scientists and seven in the Senior Executive Service.

BMR's research program is carried out by four Divisions—Geophysics, Continental Geology, Marine Geosciences and Petroleum Geology, and Petrology and Geochemistry. Mineral and petroleum resource assessments are undertaken by the Resource Assessment Division which includes Mineral Commodities Branch, a Petroleum Branch, a Mining Product Evaluation Branch, and a Geoscience Computing and Database Branch. Other branches are Planning and Programs and Special Projects and Geoscience Services.

The BMR maintains laboratories in Canberra engaged on geochemical, geochronological, organic geochemistry, and petroleum technological studies, and basic research into the design and testing of geophysical equipment. It also maintains geophysical observatories at Kowen Forest (Australian Capital Territory), Mundaring (Western Australia), Mawson (Antarctica), and Macquarie Island. The geophysical observatories are engaged in geomagnetic, ionospheric, and seismology research.

#### **State Government assistance**

In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining and allied industries where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and generally give a free technical service to the mining industry.

*New South Wales.* The primary objective of the Department of Mineral Resources is to promote the responsible development of mineral resources in New South Wales. The Department administers the various Acts (Coal, Petroleum and Mining) and grants titles to encourage and facilitate the exploration for, prospecting and development of, the State's mineral resources. The Department's staff is deployed in many diverse areas of activity to encourage and assist mining and resource development projects by the mining industry.

A wide range of services, information and advice is provided on many subjects including geological and geophysical investigations, scientific and chemical research, geological and

metallogenic mapping, prospecting, mining legislation and administrative procedures. The Geological and Mining Museum, one of the State's foremost specialist museums, is maintained by the Department, as is the reference library of geology, mining and allied topics situated at the Department's head office and Bore Core Library situated at Londonderry, near Penrith.

The Department is engaged in the continuous assessment of the State's mineral resources; its coal exploration and assessment programme in particular has identified many coal deposits of high commercial promise.

*Victoria.* The Department of Industry, Technology and Resources advises on, monitors, co-ordinates and implements minerals and energy policy. The Department conducts geological, groundwater and mineral surveys, produces geological maps, and issues scientific and technical reports thereon. Drilling operations are carried out and the results are used in sedimentary basin studies to evaluate the petroleum, mineral and groundwater potential of the State. A comprehensive library and a geological museum are maintained, while a core library retains cores and cuttings from Government and private drilling operations. The administration of petroleum, pipeline, mining and extractive industry legislation ensures that mineral, stone and petroleum exploration and production (both onshore and offshore), mining and quarrying are regulated and controlled. Technical assistance and advice are available for mineral, stone, groundwater and petroleum exploration and prospecting. Five stamp batteries located throughout the State provide an ore-crushing service to enable test crushing to be made at nominal cost. Information is available on mining law and mineral statistics. Assays of ores and analytical services are also available from the State Chemical Laboratory for a fee.

*Queensland.* The Department of Mines regulates, encourages and assists the search for and development of mineral and energy resources, including coal, petroleum and oil shale working through a system of authorities, leases and licenses issued under Acts of Parliament.

The Department provides assistance to mining by way of grants for construction and maintenance of roads in mining areas, repayable advances or subsidies for mine development, hiring of equipment, assistance to prospectors and geological services. Detailed information is collated from in-house geological studies and seismic surveys and continuous scientific appraisal of results achieved and reported by commercial exploration groups. The information effort is underpinned by a Departmental drilling program focusing on coal and mineral exploration and deep stratigraphic drilling.

The Department carries out a continuous inspection of mine safety and provides an expert technical advisory service to mining organisations. Other activities include research on mine safety and health and the administration of safety regulations on gas installations and storage of explosives. Additionally, the Department maintains an Assay Office at Cloncurry, a District Geologist's Office at Charters Towers and has Inspectors of Mines, both metalliferous and coal, stationed at various major centres throughout the State.

The Queensland Coal Board contributes to coal mining research programmes and undertakes sampling tests of Queensland coals. It can make funds available to colliery proprietors for equipment. It provides grants or loans for the provision of amenities for employees and for communities in Queensland coal mining areas. The Board also provides financial assistance for the Coal Miners' Health Scheme.

*South Australia.* The Role of the Department of Mines and Energy is:

- to provide an information service and advice to the Government, Government agencies, private industry and general public on exploration, development and processing of the State's mineral, energy and underground water resources;
- to ensure that the State's mineral, energy and underground water resources are assessed and developed in accordance with Government policy;
- to encourage private sector exploration for mineral and energy resources in the State;
- to provide advice to Government on overall energy development, utilisation and conservation, including alternative energy sources;
- to ensure that industries engaged in exploring, extracting and processing mineral and energy resources adopt effective safety precautions within their operations;
- to ensure that the Government's policies on environmental protection measures are adopted by organisations engaged in exploration and development of the State's mineral, energy and underground water resources;
- to provide geoscientific research and specialist services as part of an ongoing process of acquiring and updating geological and geophysical data throughout the State for the benefit of the mining industry, other Government Departments and the community.

*Western Australia.* The Western Australian Department of Mines operates thirteen State batteries throughout the goldfields, for the treatment of ore (principally gold) from prospectors and small mine owners, at a nominal charge. Through its Geological Survey Division, the Mines Department carries out geological investigations and surveys throughout the State. The results of this work are made available in both map and report format. The Government Chemical Laboratories Branch of the Mines Department provides analytical and research services to the mining and mineral exploration industry.

*Tasmania.* The Department of Mines provides financial assistance to mining lessees for the purchase of plant and machinery; for sinking, repairing or de-watering of shafts; for construction of dams and water races; for testing and proving a deposit of any mining product; for developmental work; and for diamond and other types of drilling. The Department has available for hire percussion and diamond drills for exploration. Other assistance is rendered to the industry through geological and engineering advice, ore-dressing research into metallurgical recoveries, and the selection and design of treatment plant.

*Northern Territory.* The Department of Mines and Energy encourages the development of an efficient mining and processing industry. Through six divisions the Department administers relevant legislation and provides a wide range of services.

Mines Division has primary responsibility for the development of policy and legislation relating to exploration and mining industries. It also provides advice to the government on special projects. The Division has regulatory responsibility in the fields of occupational hygiene, mine safety and environment protection to ensure the efficient, orderly and safe recovery and utilisation of the Territory's mineral resources. A range of technical and financial services are also provided to small miners and prospectors.

Energy Division has primary responsibility for policy development, and advice to Government, on all energy matters. Its regulatory function in the petroleum exploration and development area is administered from Darwin and Alice Springs.

The N.T. Geological Survey Division elucidates the regional geology and geophysics of the Territory, researches new mapping, geological survey and mineral search techniques and provides technical information through its computer indexes at Darwin and Alice Springs.

Water Resources Division is responsible for the assessment and management of water resources. Their activities include development of water supplies by construction of production bores and the provision of advice and assistance to the public developing private water supply. The Division carries out water pollution monitoring programs. Data compilation services are provided related to surface and groundwater resources.

Industrial Safety Division provides inspectorial, training and advisory safety services in the fields of construction safety, dangerous goods and machinery safety. These services are provided from the Division's offices at Darwin, Alice Springs, Tennant Creek and Katherine.

Regulation and orderly administration of mineral and petroleum tenure, and provision of essential drafting services fall within the ambit of the Administration Division.

## Research

Research investigations into problems of exploration, mining, ore-dressing and metallurgy are conducted by, government bodies, universities, private enterprise, or by the combined efforts of all these. A summary of their functions follows, for further information on research see Chapter 25, Science and Technology.

### Australian Atomic Energy Commission

For a detailed description of the activities of the Australian Atomic Energy Commission see Chapter 18, Energy.

### The Australian Mineral Development Laboratories

Technical consulting, contract research and process design for the mineral and associated industries is undertaken by The Australian Mineral Development Laboratories (Amdel). Operations are based in Adelaide with branch laboratories in Perth, Melbourne, Sydney, Brisbane, Darwin and Townsville. This organisation is controlled by a council comprising representatives of the mineral industry, the South Australian Government and the Commonwealth Government. Extensive facilities are available in the fields of analytical chemistry, mineralogy, petrology, hydrocarbon fuels, chemical metallurgy and mineral engineering, process instrumentation and control, water and waste water treatment and materials technology. Both long and short term applied research is carried out and all investigations are conducted on a strictly confidential basis. Services in the field of pollution and environmental control are also available through the Amdel group, Aspect.

### **The Baas Becking Geobiological Laboratory**

In 1965, the Baas Becking Geobiological Laboratory was established in the Bureau of Mineral Resources building in Canberra under the joint sponsorship of the Commonwealth Scientific and Industrial Research Organization, the Bureau of Mineral Resources, Geology and Geophysics and the Australian Mineral Industries Research Association (*see* Research by private enterprise, below).

Subjects of current research are ore genesis and petroleum related investigations. Geological research is coordinated with the field research programs of the Bureau of Mineral Resources, Geology and Geophysics.

### **Bureau of Mineral Resources, Geology and Geophysics**

The BMR is the largest geoscience research organisation in Australia. Its role is to develop an integrated scientific understanding of the geology of the Australian continent, its Territories and offshore areas, as a basis for mineral exploration and resource assessment. BMR carries out programs in:

- Fossil Fuels: including their origin and distribution in space and time; onshore sedimentary basin analysis; geophysical investigations of the structure of onshore basins; framework studies of Australian offshore areas; and modern marine processes.
- Minerals: including their origin and distribution in space and time; metallogenic provinces; the weathered zone; and related resources; airborne geophysical mapping and interpretation; crustal geophysics; and the origin and distribution of offshore mineral deposits.
- Ground water, and basin hydrogeology.
- Earthquake hazards.
- National and international geoscience maps.
- Overseas programs: including land geoscience in Southeast Asia; marine geosciences in the Southwest Pacific; geoscientific co-operation with China; and Antarctica.
- Petroleum and mineral resource assessment.
- National geoscience data base.

### **Commonwealth Scientific and Industrial Research Organization**

#### *Minerals Research*

Minerals research by the Commonwealth Scientific and Industrial Research Organization (CSIRO) is undertaken within the Institute of Energy and Earth Resources. The research has the objectives of improving methods of locating, evaluating, defining and characterising Australia's mineral resources and of planning their recovery, development and effective use consistent with the minimization of environmental stresses. Divisions of the Institute engaged in minerals research are the Division of Geomechanics at Syndal (Vic.); the Division of Fossil Fuels at North Ryde (N.S.W.); the Division of Mineral Chemistry at Port Melbourne (Vic.); the Division of Mineral Engineering at Clayton (Vic.); the Division of Mineralogy and Geochemistry at Perth (W.A.), and the Division of Mineral Physics and Mineralogy at North Ryde (N.S.W.). The Institute Headquarters is located in Canberra (A.C.T.).

### **Department of Resources and Energy**

The functions of the National Coal Research Advisory Committee which was established in 1964 have been incorporated into the National Energy Research, Development and Demonstration Council (NERDDC) which is administered by the Department of Resources and Energy. For details of NERDDC, which advises the Minister for Resources and Energy on matters relating to national energy policy *see* Chapter 18, Energy, and Chapter 25, Science and Technology.

### **University Research**

The various universities in Australia carry out research into various aspects of the mineral industry such as geology, ore mineralogy and genesis, mining techniques, mineral processing, extractive metallurgy, and materials and metals technology.

### **Research by private enterprise**

The Australian Mineral Industries Research Association Limited (AMIRA) is a non-profit organisation which was set up in 1959 by the Australian mineral industry to manage jointly sponsored research and development on behalf of the industry. There are more than 70 members of AMIRA, drawn from all parts of the mineral, coal and petroleum industries. Membership ranges from small exploration companies to large mining houses and includes



suppliers of services to the industry. The policy of the Association is determined by a Council elected by members.

AMIRA has no research facilities so organisations such as CSIRO, universities, consultants, suppliers or member companies carry out the research as contractors to AMIRA. Research contracts worth approximately \$3.0 million per annum are handled by AMIRA.

### International relations

Because Australia is a large supplier of certain minerals to the rest of the world, and because the welfare of the domestic industry depends to a large extent on the maintenance of a high level of exports, international relations are of considerable importance to the industry, and the Commonwealth Government takes an active role in international consultations and discussions relating to minerals. The most important international commitments are discussed below.

#### International Tin Agreement

The First International Tin Agreement (of the post-war period) was in operation for five years from 1 July 1956 to 30 June 1961. It was followed by the Second, Third, Fourth, Fifth and Sixth International Tin Agreements, which came into force on 21 February 1962, 21 March 1967, 1 July 1971, 1976 and 1982 respectively. Australia joined the Fourth, Fifth and Sixth Agreements as a 'producing' (i.e. exporting) member, whereas in the first three agreements Australia's status had been that of a 'consuming' (i.e. importing) member. Details of the Second and Third Agreements are given in Year Book No. 57, pages 911-12. Details of the Fourth Agreement are given in Year Book No. 61, page 942, and those of the Fifth in Year Book No. 66, page 376.

The objectives and provisions of the present (Sixth) Agreement are broadly similar to those of its predecessors. The International Tin Agreement establishes floor and ceiling prices for tin and, by the medium of a buffer stock and remedial trading, aims at confining the prices within these limits. The Sixth Agreement provides for a larger buffer stock than in the previous Agreements of up to 50,000 tonnes of tin metal. For the first time, financing of the buffer stock is being shared equally between producers and consumers. In the event of persistent market disequilibrium through causes beyond the control of the buffer stock mechanism, the agreement provides for the regulation of exports and stocks to stabilise the market.

The sixth International Tin Agreement is administered by the International Tin Council, which is made up of the following governments: *Producers*—Australia, Indonesia, Malaysia, Nigeria, Thailand, Zaire; *Consumers*—Belgium-Luxembourg, Canada, Denmark, Finland, France, Germany (Federal Republic of), Greece, India, Ireland (Republic of), Italy, Japan, Netherlands, Norway, Poland, Sweden, Switzerland, and the United Kingdom. The producing countries hold a total of 1,000 votes, distributed so that each country receives five initial votes and an additional number corresponding to its percentage as laid down by the Agreement. The consuming countries hold a total of 1,000 votes also distributed so that each country receives five initial votes and an additional number proportionate to quantities consumed. The allocation of votes in each category is periodically reviewed.

#### Association of Tin Producing Countries

The Association of Tin Producing Countries (ATPC) came into force on 16 August 1983. Membership is open to countries which are net exporters of tin. The current members are Bolivia, Indonesia, Malaysia, Thailand, Zaire, Nigeria and Australia. The main objective of the ATPC is to encourage greater consumption of tin through research, development and promotion.

#### International Lead-Zinc Study Group

With the cessation of stockpile buying of lead and zinc by the United States Government in 1958, world producers were faced with the prospect of a serious imbalance between world supply and demand for these metals. To meet this problem, a series of meetings of interested governments was held at which Australia was represented. These meetings culminated in the formation of the International Lead-Zinc Study Group which was established in January 1960. The Study Group comprises the following Governments: Algeria, Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Czechoslovakia, Denmark, Finland, France, Germany (Federal Republic of), Hungary, India, Iran, Ireland (Republic of), Italy, Japan, Mexico, Morocco, Netherlands, Norway, Peru, Poland, South Africa (Republic of), Spain, Sweden, Tunisia, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern

Ireland, United States of America, Yugoslavia and Zambia. The Group provides opportunities for inter-governmental consultations on international trade in lead and zinc and for studies of the world situation in lead and zinc.

#### **Association of Iron Ore Exporting Countries (APEF)**

Australia is a founder member of the Association of Iron Ore Exporting Countries (APEF) whose members account for about 44% of world iron ore exports. Other members are Algeria, India, Liberia, Mauritania, Peru, Sierra Leone, Sweden and Venezuela.

The Association was formed in 1975 with a Secretariat located in Geneva, Switzerland. The Agreement establishing the Association provides for a Conference of Ministers, which meets once every two years. A Board, comprising representatives of each member country meets twice a year.

The objectives of the Association are to promote close co-operation among member countries with a view to safeguarding their interests in relation to the iron ore export industry. The Association provides a forum for consultations and exchange of information on problems relating to the iron ore export industry.

The Association's Secretariat publishes a statistical bulletin twice a year as well as occasional papers on the iron ore industries of major producing countries.

#### **Intergovernmental Council of Copper Exporting Countries (CIPEC)**

The CIPEC was established in 1967 by the Governments of Chile, Peru, Zaire and Zambia as an intergovernmental consultative organisation.

Australia and Papua-New Guinea were admitted as Associate Members and Indonesia as a Full Member in 1975, the latter changing to Associate Membership from 1 January, 1986. Yugoslavia was admitted as an Associate Member in 1977. Associate Members may participate in meetings but have no voting rights and are not bound by CIPEC's decisions.

The key objectives of CIPEC are to co-ordinate measures to achieve continuous growth in real earnings from copper exports and to harmonise the decisions and policies of members relating to copper production and marketing.

#### **International Bauxite Association**

Australia joined the International Bauxite Association (IBA) as a founder member in October 1974. Other members are Dominican Republic, Ghana, Guinea, Guyana, India, Indonesia, Jamaica, Sierra Leone, Suriname and Yugoslavia. Members account for about three-quarters of world bauxite production with Australia accounting for nearly one third of world production.

The objectives of the Association are to promote the orderly and rational development of the bauxite industry; to secure for members fair and reasonable returns from the exploitation, processing and marketing of bauxite and its products for the economic and social development of their peoples, bearing in mind the recognised interests of consumers; and generally to safeguard the interests of member countries in relation to the bauxite industry.

The Association consists of a Council of Ministers which meets once a year, an Executive Board consisting of senior officials which meets three times a year and a Secretariat which is located in Kingston, Jamaica.

The IBA provides members with an opportunity to discuss common problems and evolve co-operative policies to facilitate further development of their bauxite/alumina/aluminium industries. The Association's work is mostly concerned with exchanging views and information on a range of industry matters. The commercial and technical aspects of formulating minimum export prices for bauxite and alumina have received particular attention. In November 1984 the Council adopted recommendations on minimum CIF prices for bauxite and alumina sold by member countries in 1985. Australia was not included in the majority that voted for the recommendations and is not bound by them. The Association publishes a Quarterly Review.

## **MINERAL INDUSTRY STATISTICS**

Statistics in the following pages refer mainly to the mining industry, mineral production, mineral exploration, mineral processing and treatment, and overseas trade.

### **Mining industry statistics**

This section contains statistics of the mining industry in Australia obtained from the annual census of mining establishments. The annual mining census is conducted throughout Australia

on an integrated basis with other economic censuses, e.g. the annual census of manufacturing establishments, electricity and gas establishments and the periodic censuses of retail, wholesale trade, construction, transport and selected services establishments.

Statistics are also available for enterprises engaged in the mining industry. The latest statistics for mining are in respect of 1982-83 and were published in the *Enterprise Statistics: Details by Industry Class, Australia, 1982-83* (8103.0). Enterprise statistics for mining are now produced annually and should be available within two years of the end of the financial year to which they relate. A description of the statistics and broad summary tables, in respect of the 1981-82 and 1982-83 censuses and surveys are given in Chapter 17.

The following table shows key items of data for establishments in Australia for 1983-84 based on the 1978 edition of the *Australian Standard Industrial Classification* (ASIC).

MINING ESTABLISHMENTS: SUMMARY OF OPERATIONS BY INDUSTRY CLASS, 1983-84

Industry ASIC code	Description	Establish- ments at 30 June	Average employment over whole year(a)			Wages and salaries (b)	Turnover	Stocks		Total pur- chases, transfers in and selected expenses	Fixed capital expendi- ture Value added	less disposals
			Males	Females	Persons			Opening	Closing			
		No.	No.	No.	No.	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
	Metallic minerals											
	Ferrous metal ores											
1111	Iron ores . . . . .	22	6,504	972	7,476	197,998	1,751,883	266,332	176,943	730,782	931,714	17,977
1112	Iron ore pelletising . . . . .	2	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
	Non-ferrous metal ores											
1121	Bauxite . . . . .	8	1,931	190	2,121	53,519	337,920	18,551	19,977	75,580	263,767	19,624
1122	Copper ores . . . . .	10	3,096	201	3,297	82,678	270,973	46,599	44,848	126,884	142,339	48,009
1123	Gold ores . . . . .	120	3,703	246	3,949	94,553	488,150	59,527	66,649	206,985	288,287	177,906
1124	Mineral sands . . . . .	11	1,218	105	1,323	28,465	166,940	63,301	46,494	77,703	72,430	15,465
1125	Nickel ores . . . . .	4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1126	Silver-lead-zinc ores . . . . .	16	6,981	365	7,346	176,707	762,160	140,633	158,348	290,341	489,534	48,692
1127	Tin ores . . . . .	106	1,440	144	1,584	28,986	114,823	34,882	41,466	65,198	56,209	10,347
1128	Uranium ores . . . . .	3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1129	Non-ferrous metal ores n.e.c. . . . .	8	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
11	Total metallic minerals . . . . .	310	28,504	2,612	31,116	776,174	4,722,452	841,728	776,709	1,893,962	2,763,471	413,460
	Coal, oil and gas											
1201	Black coal . . . . .	130	30,683	848	31,531	999,398	4,706,145	653,573	656,427	2,045,842	2,663,157	794,368
1202	Brown coal . . . . .	6	2,420	13	2,433	65,199	169,881	22,173	16,529	51,017	113,221	13,384
1300	Oil and gas . . . . .	22	3,176	603	3,779	112,537	2,860,022	58,055	108,072	198,482	2,711,557	1,141,273
12,13	Total coal, oil and gas . . . . .	158	36,279	1,464	37,743	1,177,134	7,736,048	733,801	781,028	2,295,341	5,487,935	1,949,025
	Construction materials											
1401	Sand and gravel . . . . .	393	1,733	190	1,923	37,044	256,503	15,004	15,933	119,900	137,532	6,900
1404	Construction materials n.e.c. . . . .	447	3,668	403	4,071	79,437	472,779	45,073	43,683	228,535	242,856	19,620
14	Total construction materials . . . . .	840	5,401	593	5,994	116,481	729,282	60,077	59,617	348,435	380,387	26,520
	Other non-metallic minerals—											
1501	Limestone . . . . .	61	754	26	780	16,823	71,800	7,104	6,960	36,363	35,293	3,956
1502	Clays . . . . .	107	218	24	242	4,010	29,309	4,533	3,896	16,697	11,976	567
1504	Salt . . . . .	19	568	74	642	15,032	81,172	18,499	20,584	26,639	56,617	3,014
1505	Non-metallic minerals n.e.c. . . . .	135	974	137	1,111	22,908	154,104	33,574	51,595	82,447	89,679	60,667
15	Total other non-metallic minerals . . . . .	322	2,514	261	2,775	58,773	336,385	63,710	83,035	162,145	193,565	68,204
	Total mining											
	(excl. services to mining)	(c),1,630	72,698	4,930	77,628	2,128,562	13,524,166	1,699,315	1,700,388	4,699,883	8,825,357	2,457,209

(a) Includes working proprietors (b) Excludes amounts drawn by working proprietors. (c) Includes a number of small establishments in Queensland from which data were not previously collected.

## Mineral production

This section contains details of the output (quantity and value) of principal minerals produced and the metallic content of ores, concentrates, etc.

The statistics shown have been derived from data collected in the annual mining census and in returns to the various State Mines Departments, supplemented in some cases by information made available by the Department of Resources and Energy and from other sources.

For details of the scope of mineral production statistics and their relation to mining industry statistics, and the principles for measuring the output of minerals, see Year Book No. 61 and earlier issues.

**Quantity of minerals produced**

The following tables show particulars of the quantities of principal minerals produced and contents of principal metallic minerals produced during 1983-84 and earlier years. Further data are available relative to all minerals in the annual publication *Mineral Production, Australia* (8405.0).

**QUANTITY OF PRINCIPAL MINERALS PRODUCED**

<i>Mineral</i>		1981-82	1982-83	1983-84
<b>METALLIC MINERALS</b>				
Bauxite . . . . .	'000 tonnes	24,690	n.p.	n.p.
Copper concentrate . . . . .	"	905	n.p.	n.p.
Copper ore . . . . .	"	23,067	15,864	40,371
Gold bullion (a) . . . . .	kg	21,008	n.p.	n.p.
Iron ore . . . . .	'000 tonnes	86,786	78,971	76,478
Lead concentrate . . . . .	"	704	724	n.p.
Lead-copper concentrate . . . . .	tonnes	31,999	24,968	20,835
Lead-zinc concentrate . . . . .	"	41,179	40,205	37,932
Manganese ore—				
Metallurgical grade . . . . .	'000 tonnes	1,198	n.p.	n.p.
Mineral sands—				
Ilmenite concentrate (b) . . . . .	"	1,238	932	1,017
Rutile concentrate . . . . .	"	220	195	163
Zircon concentrate . . . . .	"	459	404	412
Nickel concentrate . . . . .	"	423	483	506
Tantalite-columbite concentrate . . . . .	tonnes	263	149	92
Tin concentrate . . . . .	"	24,604	20,424	16,448
Tungsten concentrates—				
Scheelite concentrate . . . . .	"	3,364	2,307	1,801
Wolfram concentrate . . . . .	"	2,017	1,502	1,499
Uranium concentrate . . . . .	"	5,086	n.p.	n.p.
Zinc concentrate . . . . .	'000 tonnes	1,097	1,206	1,147
<b>COAL</b>				
Black coal—				
Bituminous . . . . .	'000 tonnes	92,246	98,687	106,664
Sub-bituminous . . . . .	"	7,172	8,880	9,463
Brown coal—				
For briquettes . . . . .	"	2,658	1,956	1,900
Other . . . . .	"	34,904	33,042	31,345
Briquettes . . . . .	"	993	760	760
<b>OIL AND GAS</b>				
Crude oil (stabilised) . . . . .	megalitres	22,378	22,069	26,826
Natural gas . . . . .	gigalitres	11,550	11,654	12 098
Ethane . . . . .	"	152	169	175
<b>CONSTRUCTION MATERIALS</b>				
Sand . . . . .	'000 tonnes	28,712	24,312	24,760
Gravel . . . . .	"	16,088	13,240	14,612
Crushed and broken stone . . . . .	"	58,478	50,619	55,407
Other (decomposed rock, dimension stone, etc.) . . . . .	"	34,105	30,066	29,239
<b>OTHER NON-METALLIC MINERALS</b>				
Asbestos (chrysotile) . . . . .	tonnes	34,293	11,872	—
Brick clay and shale . . . . .	'000 tonnes	7,882	6,198	6,476
Limestone (including shell and coral) . . . . .	"	12,790	n.p.	10,333
Salt . . . . .	"	4,985	n.p.	n.p.
Silica . . . . .	"	1,895	n.p.	2,060

(a) Includes alluvial gold. (b) Includes ilmenite from which titanium dioxide is not commercially extractable and beneficiated ilmenite.

## CONTENTS OF PRINCIPAL METALLIC MINERALS PRODUCED

<i>Contents of metallic minerals produced</i>		1981-82	1982-83	1983-84
Antimony . . . . .	tonnes	1,218	768	719
Cadmium . . . . .	"	2,083	n.p.	2,214
Cobalt . . . . .	"	3,075	2,833	1,952
Copper . . . . .	"	259,707	235,302	249,282
Gold . . . . .	kg	22,328	25,825	33,881
Iron (b) . . . . .	'000 tonnes	54,886	n.p.	n.p.
Lead . . . . .	tonnes	454,776	n.p.	n.p.
Manganese . . . . .	"	587,919	n.p.	n.p.
Monazite . . . . .	"	10,636	10,536	15,207
Nickel . . . . .	"	81,424	82,945	75,770
Palladium . . . . .	kg	360	461	506
Platinum . . . . .	"	65	55	71
Silver . . . . .	"	887,569	n.p.	n.p.
Sulphur . . . . .	tonnes	414,551	n.p.	345,094
Tantalite-columbite (Ta <sub>2</sub> O <sub>5</sub> + Nb <sub>2</sub> O <sub>5</sub> ) . . . . .	kg	129,635	78,975	50,013
Tin . . . . .	tonnes	12,750	n.p.	8,688
Titanium dioxide (TiO <sub>2</sub> ) . . . . .	"	940,946	n.p.	758,233
Tungstic oxide (WO <sub>3</sub> ) . . . . .	mtu (a)	384,294	n.p.	239,236
Yttrium oxide (Y <sub>2</sub> O <sub>3</sub> ) . . . . .	kg	17,152	n.p.	15,060
Zinc . . . . .	tonnes	623,904	n.p.	n.p.
Zirconium dioxide (ZrO <sub>2</sub> ) . . . . .	"	299,201	266,565	275,153

(a) Metric ton unit (mtu) equals 10 kilograms. (b) Excludes iron content of iron oxide not intended for metal extraction. Includes iron contained in iron concentrate.

## Value of minerals produced

The following table shows the value of principal minerals produced during 1983-84 and earlier years. Further data are available in the annual publication *Mineral Production, Australia* (8405.0).

VALUE OF PRINCIPAL MINERALS PRODUCED  
(\$'000)

<i>Mineral</i>	1981-82	1982-83	1983-84
<b>METALLIC MINERALS</b>			
Bauxite . . . . .	n.p.	n.p.	n.p.
Copper concentrate . . . . .	231,952	264,144	275,385
Copper ore . . . . .	8,110	1,174	2,242
Gold bullion (a) . . . . .	200,408	n.p.	n.p.
Iron ore . . . . .	1,131,186	n.p.	n.p.
Lead concentrate . . . . .	252,136	n.p.	n.p.
Lead-copper concentrate . . . . .	21,474	n.p.	n.p.
Lead-zinc concentrate . . . . .	8,445	9,723	9,786
Manganese ore—			
Metallurgical grade . . . . .	46,136	n.p.	n.p.
Mineral sands—			
Ilmenite concentrate (b) . . . . .	36,610	26,737	37,022
Rutile concentrate . . . . .	61,758	47,817	42,879
Zircon concentrate . . . . .	37,526	40,892	43,431
Nickel concentrate . . . . .	n.p.	n.p.	n.p.
Tantalite-columbite concentrate . . . . .	11,091	3,971	2,411
Tin concentrate . . . . .	141,716	133,405	n.p.
Tungsten concentrates—			
Scheelite concentrate . . . . .	27,612	n.p.	n.p.
Wolfram concentrate . . . . .	15,607	n.p.	8,891
Uranium concentrate . . . . .	356,219	n.p.	n.p.
Zinc concentrate . . . . .	n.p.	220,546	278,040
<b>COAL</b>			
Black coal—			
Bituminous . . . . .	2,777,212	3,303,340	3,320,769
Sub-bituminous . . . . .	143,903	205,531	234,686
Brown coal—			
For briquettes . . . . .	..	..	..
Other . . . . .	137,138	150,788	135,736
Briquettes . . . . .	22,754	19,808	18,136

**VALUE OF PRINCIPAL MINERALS PRODUCED—continued**  
(*\$'000*)

<i>Mineral</i>	<i>1981-82</i>	<i>1982-83</i>	<i>1983-84</i>
<b>OIL AND GAS</b>			
<i>Oil and Gas</i> . . . . .	<i>1,779,989</i>	<i>2,089,401</i>	<i>3,024,008</i>
<b>CONSTRUCTION MATERIALS</b>			
Sand . . . . .	110,239	112,502	123,520
Gravel . . . . .	80,566	75,627	98,606
Crushed and broken stone . . . . .	325,406	320,563	374,348
Other (Decomposed rock, dimension stone, etc.) . . . . .	94,148	95,997	91,996
<b>OTHER NON-METALLIC MINERALS</b>			
Asbestos (chrysotile) . . . . .	14,464	4,766	—
Brick clay and shale . . . . .	27,029	18,996	21,007
Gems			
Opal(c) . . . . .	45,374	42,131	45,987
Sapphire . . . . .	22,675	21,566	13,627
Limestone (incl. shell and coral) . . . . .	58,785	n.p.	54,767
Salt . . . . .	52,177	n.p.	n.p.
Silica . . . . .	18,494	18,357	23,466

(a) Includes alluvial gold. (b) Includes ilmenite from which titanium dioxide is not commercially extractable and beneficiated ilmenite. (c) Partly estimated.

### Foreign participation of the mining industry in Australia

Summary information on foreign participation in the mining industry in Australia is shown in Chapter 24, Foreign Transactions. More detailed statistics are available in *Foreign Ownership and Control of the Mining Industry, Australia 1982-83* (5317.0) and *Foreign Control in Mineral Exploration, Australia 1975-76* (5323.0).

### Mineral exploration (other than for petroleum and oil shale)

#### Definition

Exploration consists of the search for and/or appraisal of new ore occurrences and known deposits of minerals (including extensions to deposits being worked) by geological, geophysical, geochemical and other methods (including drilling). Exploration for water is excluded. The construction of shafts and adits is included if primarily for exploration purposes. Excluded are mine development activities carried out primarily for the purpose of commencing or extending mining or quarrying operations (including the construction of drives, shafts, winzes, etc. in underground mines, and the preparation of quarrying sites, including overburden removal, for open-cut extraction).

#### Sources of statistics

The statistics of exploration for minerals *other than petroleum and oil shale* are derived from the annual mineral exploration census conducted by the Australian Bureau of Statistics in each State and the Northern Territory (in New South Wales the census is conducted jointly with the State Department of Mineral Resources).

#### Classification

The data obtained in the mineral exploration census are divided into the following categories:

(a) *Private exploration on production leases*—relates to exploration carried out on the production lease by privately-operated mines currently producing or under development for the production of minerals.

(b) *Other private exploration*—relates to exploration carried out by private enterprises on areas covered by exploration licences, authorities to enter, authorities to prospect and similar licences and authorities issued by State Governments for exploration of minerals. Also included is exploration by private enterprises which is not directly connected with areas under lease, licence, etc.

(c) *Exploration by government*—relates to exploration of minerals carried out by Federal and State Government Departments, local government authorities and business undertakings operated by those departments or authorities.

### Expenditure, metres drilled

The following table shows expenditure and metres drilled on private mineral exploration other than for petroleum and oil shale in Australia during the last six years.

PRIVATE MINERAL EXPLORATION (OTHER THAN FOR PETROLEUM AND OIL SHALE)						
	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
Expenditure (\$'000)—						
On drilling . . . . .	50,729	72,408	126,088	141,872	89,723	92,647
Other . . . . .	131,780	213,722	344,401	433,700	348,188	323,739
Australia . . . . .	182,509	286,130	470,489	575,572	437,911	416,386
Metres drilled ('000)—						
Drilled-core . . . . .	565	862	1,156	1,201	871	1,080
Drilled-non-core. . . . .	1,763	2,055	2,808	2,824	1,882	2,106
Australia . . . . .	2,328	2,917	3,965	4,025	2,752	3,186

### Oil shale exploration

Statistics of exploration for oil shale are derived from an annual exploration census conducted by the Australian Bureau of Statistics.

Exploration consists of the search for and/or appraisal of new ore occurrences and known deposits of oil shale (including extensions to deposits being worked) by geological, geophysical, geochemical and other methods (including drilling). The construction of shafts and adits is included if primarily for exploration purposes. Excluded are mine development activities carried out primarily for the purpose of commencing or extending mining operations (including the construction of drives, shafts, winzes, etc. in underground mines, and overburden removal, for open-cut extraction).

In 1983-84 expenditure in Australia on private exploration for oil shale amounted to \$22,298,000 with 14,000 metres being drilled.

### Petroleum exploration

#### Source of statistics

These statistics of expenditure on petroleum exploration have been obtained by the addition of values collected in a quarterly survey conducted by the Australian Bureau of Statistics. Other data shown were collected by the Bureau of Mineral Resources, Geology and Geophysics. Further information relating to petroleum exploration is published by the Australian Bureau of Statistics in its annual publication *Mineral Exploration, Australia* (8407.0) and by the Bureau of Mineral Resources, Geology and Geophysics in *The Petroleum Newsletter* (issued quarterly) and *The Australian Mineral Industry Annual Review*.

#### Scope

Petroleum exploration consists of the search for and/or appraisal of deposits of crude oil and/or natural gas and natural gas liquids by geological, geophysical, geochemical, and other exploration methods, including drilling. Included in the expenditure are the costs of drilling exploratory oil and/or gas wells and the testing of such wells. Also included are the costs of access roads, site construction, permits, licences and similar fees, relevant office buildings and furniture, transportation equipment, storage facilities, plant and equipment, and review work where these are undertaken primarily for purposes of exploration for deposits of petroleum. Details of developmental oil and/or gas wells are excluded.

#### Operations

The following table shows particulars of expenditure, and wells and metres drilled in petroleum exploration in recent years.

## PETROLEUM EXPLORATION

		1981-82	1982-83	1983-84
<b>Expenditure—</b>				
Private . . . . .	\$'000	803,983	927,405	823,692
Government . . . . .	\$'000	6,797	10,188	n.a.
<b>Total</b> . . . . .	<b>\$'000</b>	<b>810,781</b>	<b>937,592</b>	<b>n.a.</b>
<b>Wells (a)—</b>				
<b>Drilled (i.e. those which reached final depth)—</b>				
As oil producers . . . . .	No.	21	36	43
As gas producers . . . . .	No.	38	42	27
Plugged and abandoned . . . . .	No.	99	143	141
<b>Total</b> . . . . .	<b>No.</b>	<b>158</b>	<b>221</b>	<b>211</b>
Average final depth of wells drilled . . . . .	m	1,999	2,047	1,976
<b>Drilling still in progress at 31 December (uncompleted holes) . . . . .</b>				
	No.	17	14	14
<b>Wells drilled or drilling over 3,000 metres . . . . .</b>				
	No.	18	31	39
<b>Metres drilled (a)—</b>				
Completed wells . . . . .	m	296,818	426,208	390,050
Uncompleted holes . . . . .	m	25,566	26,036	20,993
<b>Total</b> . . . . .	<b>m</b>	<b>322,384</b>	<b>452,244</b>	<b>411,043</b>

(a) Source: Bureau of Mineral Resources, Geology and Geophysics. Data relates to years ended 31 December.

## Mineral processing and treatment

The extraction of minerals from ore deposits, as in mining and quarrying, is only a part of mineral technology, as few minerals can be directly used in the form in which they are mined. In most cases minerals must undergo considerable processing and treatment before utilisation. The sectors of the economy which carry out this work are classified for statistical purposes to Manufacturing Industry (see Chapter 17, Manufacturing and Internal Trade).

## Principal products

The following table shows particulars of the production of certain important manufactured products of mineral origin during recent years.

## PRODUCTION (a) OF PRINCIPAL MANUFACTURED PRODUCTS OF MINERAL ORIGIN

Commodity		1981-82	1982-83	1983-84
<b>METALS(b)</b>				
<b>Non-ferrous—</b>				
Alumina . . . . .	'000 tonnes	6,651	6,701	8,030
Refined aluminium . . . . .	tonnes	380,457	403,917	617,921
Blister copper(c) . . . . .	"	177,344	172,163	182,090
Refined copper . . . . .	"	163,052	172,456	166,429
Lead bullion (for export)(c) . . . . .	"	180,675	179,462	186,561
Refined lead . . . . .	"	207,242	212,176	190,121
Refined zinc . . . . .	"	301,266	288,250	299,738
Refined tin . . . . .	"	3,617	2,898	2,937
<b>Ferrous—</b>				
Pig iron . . . . .	'000 tonnes	6,607	4,990	5,258
Steel ingots . . . . .	"	7,260	5,392	7,614
<b>Precious—</b>				
Refined gold(d) . . . . .	kg	17,773	25,784	30,661
Refined silver . . . . .	"	325,105	303,889	273,788
<b>FUELS</b>				
<b>Coal products—</b>				
Metallurgical coke . . . . .	'000 tonnes	4,283	3,338	3,181
Brown coal briquettes . . . . .	"	993	760	746
<b>Petroleum products—</b>				
Diesel-automotive oil . . . . .	'000 tonnes	6,445	6,540	6,405
Industrial fuel and marine fuel . . . . .	"	775	721	649
Fuel oil for burning . . . . .	"	3,285	2,810	6,012
Automotive petrol . . . . .	mil. litres	14,375	14,845	14,427



PRODUCTION (a) OF PRINCIPAL MANUFACTURED PRODUCTS OF MINERAL ORIGIN—*continued*

Commodity		1981-82	1982-83	1983-84
<b>BUILDING MATERIALS</b>				
Clay bricks . . . . .	millions	2,234	1,694	1,771
Portland cement . . . . .	'000 tonnes	6,136	5,350	4,655
Plaster of paris. . . . .	"	480	n.p.	n.p.
Plaster sheets . . . . .	'000 sq m	63,768	51,229	60,313
<b>CHEMICALS</b>				
Sulphuric acid . . . . .	'000 tonnes	2,039	1,734	1,706
Caustic soda . . . . .	tonnes	n.p.	n.p.	n.p.
Superphosphate(e) . . . . .	'000 tonnes	3,464	2,877	2,668

(a) Some products exclude production of single establishment manufacturing establishments employing less than four persons and production of establishments predominantly engaged in non-manufacturing activities but which may carry on in a minor way, some manufacturing. (b) Excludes secondary metal with the exception of pig iron and steel ingots. Source: Bureau of Mineral Resources, Geology and Geophysics (non-ferrous and precious metals only). (c) Metallic content. (d) Newly-won gold of Australian origin. (e) Includes double and triple superphosphate and ammonium phosphate expressed in terms of single superphosphate, i.e. 22% P<sub>2</sub>O<sub>5</sub> equivalent.

## Overseas trade

### Exports and imports

For particulars of the quantities and values of the principal minerals and products exported from and imported into Australia during recent years, see Chapter 24, Foreign Transactions.

Considerable quantities of metallic ores, concentrates, slags, and residues are exported from Australia for refining overseas. The following table shows selected items exported during 1983 and their principal metallic content as estimated by assay.

### PRINCIPAL METALLIC CONTENTS OF SELECTED ORES AND CONCENTRATES ETC. EXPORTED FROM AUSTRALIA, 1984

Ores and concentrates, etc.	<i>Metallic contents—estimated from assay</i>							
	Copper	Lead	Zinc	Tin	Iron	Tungstic oxides	Gold	Silver
	tonnes	tonnes	tonnes	tonnes	'000 tonnes	tonnes	kg	kg
Copper concentrate . . . . .	59,321	—	—	—	—	—	10	1,746
Blister copper . . . . .	5,220	—	—	—	—	—	191	22,441
Copper matte, slags, etc.(a) . . . . .	2,499	4,289	—	—	—	—	77	4,853
Lead concentrate . . . . .	3,018	65,960	1,253	—	—	—	720	124,072
Lead bullion . . . . .	—	201,104	—	—	—	—	57	354,334
Lead slags and residues . . . . .	—	2,626	—	6	—	—	16	2,193
Zinc concentrate . . . . .	69	7,904	422,424	—	—	—	—	19,688
Zinc slags and residues . . . . .	—	—	6,457	—	—	—	—	—
Tin concentrate . . . . .	—	—	—	6,144	—	—	—	—
Iron ore—								
Pellets . . . . .	—	—	—	—	1,141	—	—	—
Fines . . . . .	—	—	—	—	28,784	—	—	—
Lump . . . . .	—	—	—	—	22,277	—	—	—
Scheelite concentrate . . . . .	—	—	—	—	—	n.a.	—	—
Wolfram concentrate . . . . .	—	—	—	—	—	1,117	—	—
<b>Total metallic content . . . . .</b>	<b>70,127</b>	<b>281,883</b>	<b>430,134</b>	<b>6,150</b>	<b>52,202</b>	<b>n.a.</b>	<b>1,071</b>	<b>529,327</b>

(a) Includes copper matte, copper slags and residues and copper-lead dross and speiss.

## REVIEW OF RECENT DEVELOPMENTS IN THE AUSTRALIAN MINERAL INDUSTRY

(Source: Bureau of Mineral Resources, Geology and Geophysics)

Major developments in the Australian mineral industry during 1984 are reviewed briefly in subsequent parts of this section. Additional information on developments in the industry is available in *Australian Mineral Industry Annual Review 1983* published by the Bureau of Mineral Resources, Geology and Geophysics. That publication contains comprehensive reviews of mineral commodities of importance to the Australian economy, as well as a general review of the industry's performance during the year. The *Australian Mineral Industry Quarterly*, Volume 37, Number 4, details Australia's identified mineral resources, 1984.

### General Review of 1984

The gross domestic product (GDP) of Australia in 1983-84 was \$196,581 million, of which an estimated \$11,300 million was generated by the mineral industry, excluding smelting and refining. If smelting and refining were included, an estimated \$2,500 million could be added to this figure, thus making the mineral industry the largest primary sector contributor to the GDP. Australia's export trade increased substantially in both current and constant price terms to a new record level. Japan, the USA, the EEC and the UK, were the main markets for mineral commodities. The USA regained its ranking of second after Japan which it had lost the previous year, displacing the UK from second to fourth place after the EEC.

The ex-mine value of mineral products in Australia in 1983 reached a new peak of \$10,570 million, \$660 million higher than in 1982. More than half of this increase resulted from both higher output and prices for crude oil, and a significant contribution was made by the other energy minerals, natural gas, and coal. Performance of the metallic minerals group was subdued; gains made by bauxite, copper, gold and lead were offset by a decline in output of iron ore, mineral sands, nickel, tin, zinc, and uranium, resulting in a net fall of about \$100 million. Diamonds contributed \$65 million to the value of mine output in the first year of their production.

### Imports—1984

The values of imports have been dominated by crude oil in the last few years, accounting for between 80 per cent and 90 per cent of Australia's mineral import bill. In 1984 imports of crude oil fell by 6 per cent or about \$100 million to \$1,681 million, resulting in a total mineral import bill of \$2,063 million. This is marginally down on the \$2,086 million recorded for 1983. Other significant mineral imports included gem diamonds, gold, phosphate, potassium fertilisers, and elemental sulphur. Imports of mineral primary products accounted for 8.0 per cent of the total value of merchandise imports compared with 9.6 per cent in 1983. Australia's mineral balance of trade was a record \$9,161 million in 1984, compared with \$7,609 million in 1983.

### Exports—1984

The value of mineral exports rose by 15.8 per cent to \$11,224 million in 1984 compared to \$9,695 million in 1983. Minerals to show gains on their 1983 levels included alumina, aluminium, black coal, gold, iron ore, nickel, crude oil, uranium and zinc. Declines were recorded in copper, lead, silver, tin and LPG among the major minerals.

Black coal remains the largest single export earner, accounting for \$3,911 million or about 35 per cent of the total value of mineral primary products exported. Iron ore was the second largest with a value of \$1,618 million (an increase of 3 per cent) followed by alumina which increased by 8 per cent to \$1,276 million. These three minerals account for nearly 61 per cent of the total value of mineral primary products exported. A significant contribution was also made by aluminium, copper, gold, lead, uranium, zinc, crude oil and LPG.

### Pattern of mineral trade—1984

During 1984 Australia exported metals and minerals to more than 100 countries. Japan accounted for 40.3 per cent of these exports by value, a decline from the 42.4 per cent recorded in 1983. Principal mineral products exported to Japan included black coal, iron ore, alumina, aluminium, copper and mineral sands.

The EEC accounted for 15.4 per cent (including 4.9 per cent to the UK) of Australia's mineral exports. Major items comprised black coal, copper, iron ore, uranium and zinc. The USA accounted for a further 12.1 per cent of the total consisting mainly of alumina, bauxite and nickel.

**Bauxite, Alumina and Aluminium**

In 1984, production of bauxite increased by 32 percent to 32.18 million tonnes, while aluminium production increased by 58 percent to 757,798 tonnes. Australia was again the world's largest producer of bauxite and alumina.

The commissioning of the new alumina refineries at Wagerup and Worsley, W.A., commenced in February 1984. Initial rated capacities are 500,000 tonnes per year, and 1,000,000 tonnes per year respectively.

Work on the Portland, Victoria, smelter (initial capacity to be 132,000 tonnes per year) recommenced in November 1984 and the first pot-line is expected to be completed by the end of 1986.

Expansion of the Kurri Kurri, N.S.W., aluminium smelter was completed in 1984, increasing total capacity from 90,000 to more than 140,000 tonnes per year. Start-up date will depend on international aluminium prices. Comalco's aluminium smelter at Boyne Island, near Gladstone, Qld, is supplied with alumina from the nearby Queensland Alumina Ltd (QAL) refinery. The smelter has a capacity of 206,000 tonnes per year. The rated capacities of the other three Australian aluminium smelters, at Tomago, N.S.W., Point Henry, Vic., and Bell Bay, Tas., are 220,000, 165,000 and 117,000 tonnes per year respectively. Tomago uses alumina from the Northern Territory and Queensland, Point Henry uses Western Australian alumina, and Bell Bay obtains its alumina from Queensland.

**Copper**

A summary of the copper mining industry in Australia 1953 to 1975 and the sufficiency of present ore reserves was published in the *Australian Mineral Industry Quarterly*, Vol. 30, No. 1.

In 1984 mine production of copper decreased to 235,811 tonnes. Western Mining Corporation Holdings Ltd (WMCH) announced that the results of a feasibility study, commissioned for the Olympic Dam Project, S.A., should be available in 1985. The study involved plans for initial staged production rates of about 55,000 tonnes per year of copper, 2,000 tonnes per year of  $U_3O_8$  (yellowcake) and 3,000 kg per year of gold, beginning in 1987 (gold) and 1988 (copper/uranium).

Exploration continued at a number of prospects including the WMCH Nifty prospect in the Throssell Ranges (W.A.), about 200 km east-southeast of Marble Bar, and the Scuddles copper-zinc project (W.A.), managed by E. Z. Industries.

**Iron**

A summary of growth of the Australian iron ore industry 1965 to 1975 was published in the *Australian Mineral Industry Quarterly*, Vol. 29, No. 1.

Production of iron ore in 1984 increased to 89.0 million tonnes, 28 per cent higher than in 1983. Ore stocks were considerably reduced as the recovery in demand outstripped production. Exports of iron ore and iron ore pellets increased by 15 per cent to 85.5 million tonnes valued at \$1,615 million. Australia was the world's third-largest producer but was displaced by Brazil in 1984 as the largest exporter.

Production at Cockatoo Island, Yampi Sound, ceased at the end of the year with the exhausting of economic resources but shipments are expected to continue for a further two years from stockpiled ore.

Possibilities for increased iron ore and iron and steel trade with China emerged in 1984 and an agreement on economic co-operation in the iron and steel industry was signed by Australia and China in August 1984. China Metallurgical Import and Export Corporation and Hamersley Iron Pty Ltd also agreed in August to study the feasibility of joint development of an iron ore mine in the Channar area, 20 kilometres east of Paraburdoo to meet additional Chinese import requirements of iron ore.

**Silver, lead and zinc**

Mine production of lead (446,000 tonnes) and zinc (667,000 tonnes) declined in 1984 because of industrial disputation at some of the major mines in the first half of the year.

Production of primary refined lead increased slightly in 1983. Lead metal production including secondary was 217,689 tonnes and zinc metal production including secondary was 306,562 tonnes.

Detailed exploration of a number of deposits continued in 1984. These included Hilton, Lady Loretta, Thalanga, Liontown and Conjuboy, all in Queensland; Woodcutters, N.T.; Golden Grove and Blondevale (Lennard Shelf) in W.A.; Benambra, Victoria and Hellyer in Tasmania.

### Black coal

Raw black coal production in 1984 was a record 139.1 million tonnes, 17 per cent higher than in 1983. The output of saleable coal rose by 16 per cent to the record level 114.8 million tonnes. Domestic consumption rose to the record level of 39.8 million tonnes in 1984, mainly due to the growth in use by both the electricity and steel industries. Exports rose by 25 per cent to 75.9 million tonnes in 1984 and the value of exports rose to \$3,905 million. Of total exports 40.9 million tonnes were shipped to Japan. Australia was the world's leading coal exporter in 1984.

Demand for steaming coal on the international market remained high. As a result Australian exports of steaming coal rose from 18.3 million tonnes in 1983 to 28.8 million tonnes in 1984. At the same time, there occurred a growth in the exports of coking coal to 47 million tonnes.

Papers dealing with the Australian coal industry have been published in the *Australian Mineral Industry Quarterly*, Vol. 31, No. 1 and Vol. 34, No. 2.

### Petroleum

At the end of 1984 there were 55 fields producing stabilised crude oil. In 1984, production of crude oil rose by 9.1 per cent, and the production of natural gas rose by 13.2 per cent.

Total refinery input declined by 3.8 per cent although the proportion of total input from indigenous sources increased from 73 per cent in 1983 to 76 per cent in 1984. Consumption of automotive gasoline (motor spirit) increased by 2.4 per cent. Consumption of all other major petroleum products except heating oil and industrial and marine diesel fuel also increased. The quantity of imported crude oil, enriched crude oil, and other refinery feedstock increased by 2.4 per cent compared with that in 1983, and its value increased by 1.1 per cent from \$2,223 million to \$2,247 million. Export of all petroleum products rose by 59.4 per cent in value to \$2,057 million.

Exploration wells drilled increased from 211 in 1983 to 264 (221 onshore, 43 offshore) in 1984, and total metres drilled for exploration increased from 411,043 m in 1983 to 516,815 m in 1984, an increase of 25.7 per cent. Geophysical exploration also increased during 1984. Offshore exploration resulted in one oil, three gas and three oil and gas discoveries; onshore exploration produced 13 oil, 14 gas, and five oil and gas discoveries. Onshore development drilling continued in: Cooper/Eromanga Basins (S.A. and Queensland) (56 wells); Amadeus Basin (N.T.) (6 wells); Barrow Island (W.A.) (4 wells); Woodada (W.A.) (2 wells); Glentulloch, Grafton Range and Westgrove (Queensland) fields (one well each field). In the offshore, except for five wells in the North Rankin Gasfield, all development drilling was restricted to the Gippsland Basin in the West Kingfish, Cobia, Fortescue and Flounder fields.

New development projects included the completion of the first phase of the Northwest Shelf gas project by the Joint Venture participants and gas was supplied to the Perth market. This included the construction of a submarine pipeline linking the North Rankin 'A' platform with the onshore facilities. The first shipment of condensate from the gas stream was loaded at Withnell Bay in late 1984. The small Sundown and Blina oil discoveries commenced production via a short pipeline from the fields to the Great Northern Highway and thence by road tanker transport to Derby. An oil production licence was granted in May for the Mt Horner oilfield in the Perth Basin. Following the discovery of oil in the Jackson area of the Cooper/Eromanga Basins of Queensland in 1981 and 1982, a pipeline was laid to Moonie in 1983 and production commenced in 1984.

The Silver Springs LPG scheme began commercial production in late 1984 from the Boxleigh/Silver Springs fields and from the Sirrah field during 1985. The Kincora field LPG plant is due for completion about March 1985. Depending on successful negotiations with industry sources at Gladstone, the Denison Trough gas fields could be developed and a 600 kilometre pipeline, including gathering systems, built to Gladstone on the east coast.

In the Northern Territory, following on from the supply of natural gas from the Palm Valley fields to Alice Springs power station, there is a proposal under consideration to build a 1,500 kilometre pipeline from the Amadeus Basin north to fuel a new power station in Darwin and a possible spurline to an alumina plant along the coast on the Gove Peninsula. Since the completion of production facilities at Mereenie the Territory's first commercial production of oil was transported by road tanker to Alice Springs. A 300 kilometre pipeline is proposed between Mereenie and Alice Springs.

Economic and sub-economic demonstrated resources of crude oil increased marginally to 289.00 gigalitres and recoverable resources of natural gas increased by 0.05 per cent from 1,456 billion (10<sup>9</sup>)m<sup>3</sup> to 1,521 billion m<sup>3</sup>. Expenditure on petroleum exploration decreased 11 per cent to 823.7 million in 1984.

**Nickel**

A summary of the growth of the Australian nickel industry was published in the *Australian Mineral Industry Quarterly*, Vol. 28 No. 4.

Mine production of nickel in ore and concentrates was 76,889 tonnes in 1984. Australia was the third largest world producer after USSR and Canada. Concentrates from Kambalda, Agnew and Mount Windarra are smelted at the Kalgoorlie nickel smelter. Some of the matte produced is railed to the Kwinana nickel refinery to be refined to nickel metal and the remainder is exported. Nickel-laterite ore mined at Greenvale, Queensland, is treated at the Yabulu nickel treatment plant to produce nickel oxide sinter for export.

**Mineral sands**

The history of the mineral sands industry is presented in the *Australian Mineral Industry Quarterly*, Vol. 25, No. 1.

Australia is still the world's largest producer and exporter of natural rutile, ilmenite, zircon and monazite. Output of concentrates increased substantially in 1984; rutile production totalled 181,481 tonnes, ilmenite 1,159,756 tonnes, zircon 454,591 tonnes and monazite 16,707 tonnes.

**Diamonds**

Commercial production of diamonds from the alluvial deposits in the Upper Smoke creek and Limestone Creek alluvials and from the scree deposits overlying the Ak-1 Kimberlite pipe at Argyle commenced in January 1983; the alluvial and scree deposits will have been mined out by 1985. Production for the year was 5.69 million carats from 1.47 million tonnes of ore. The diamonds comprise approximately 10 per cent gem, 50 per cent cheap gem, and 40 per cent industrial quality. Production from the AK-1 pipe was planned to start in late 1985. When full production is reached the Argyle mine will become the world's largest producer of diamonds.

**Uranium**

Preliminary estimates of production of uranium in Australia in 1984 amounted to 5,677 tonnes of yellowcake (4,390 tonnes contained U) 36.7 per cent greater than in 1983. Exports for 1984 were 3,308 tonnes of yellowcake (preliminary estimates only).

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- Census of Mining Establishments: Details of Operations by Industry Class, Australia (8402.0).
- Australian Mineral Industry Quarterly (8403.0).
- Mineral Production, Australia (8405.0).
- Mineral Exploration, Australia (8407.0).

**Other Publications**

- Australian Atomic Energy Commission; *Annual Report*.
- Bureau of Mineral Resources Geology and Geophysics; *Australian Mineral Industry Annual Review*.

CHAPTER 17  
MANUFACTURING AND INTERNAL TRADE  
MANUFACTURING

**Introduction**

An historical summary of the development of the manufacturing industry in Australia since 1901 is contained in Year Book, No. 51, pages 143-4.

**Decentralisation and manufacturing industries**

The decentralisation of secondary industries, and the steps taken by the Commonwealth and State Governments towards its development, are referred to in previous issues of the Year Book.

**Bounties on manufacture**

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate, or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards.

**Government authorities**

*Industries Assistance Commission*

The Industries Assistance Commission is a statutory authority which came into existence on 1 January 1974 as a result of passing of the *Industries Assistance Commission Act 1973* by the Commonwealth Parliament. The Commission replaced the Tariff Board, which since 1921 had been responsible for advising the Government on assistance for industries mainly in the secondary sector of the economy.

The Commission is an advisory authority. The Government is required to seek the Commission's advice before it makes changes in the assistance afforded industries, but the Government is not obliged to accept the Commission's advice.

In August 1983, the Government initiated an independent review by Mr John Uhrig of the functions and operations of the Commission. Decisions taken on the recommendations of that review and reflected in the *Industries Assistance Commission Amendment Act 1984* were designed to improve the Commission's operations and procedures so that it could more effectively assist the Government to meet its industry policy objectives.

The Commission's basic functions remain unchanged. These are to hold inquiries, conduct public hearings and to make reports to the Government on assistance, and matters associated with assistance, to industries in the primary, secondary and tertiary sectors of the economy. Inquiries are initiated by references from the Minister administering the *Industries Assistance Commission Act 1983*. The Commission is also required to report annually to the Government on its operations and on the general structure of industry assistance within Australia and its effects on the economy.

The new legislation involved changes to the policy guidelines under which the Commission operates. For normal inquiries, these are now cast in terms of encouraging the growth of efficient and internationally competitive industries, facilitating structural adjustment and recognising the interests of other industries and consumers.

The Commission is required to give wide public notice that it is conducting an inquiry. Under the new arrangements, a draft report is prepared on the basis of consultation with interested parties, written submissions and the Commission's own investigatory work. Draft reports are published and public hearings are held to give interested parties an opportunity to examine and comment before Commission reports are finally settled. Public hearings are conducted in an informal manner and may be held in Canberra or in other cities throughout Australia.

It is the Government's intention that, in most cases, final Commission reports will be published prior to a Government decision being taken. When released for publication, these Commission reports are sold by Australian Government Publishing Service Bookshops.

If after receiving a report from the Commission, the Government decides that assistance afforded a particular industry should be changed, it introduces a proposal to this effect in Parliament. Thus the final responsibility for altering assistance given to particular industries within Australia rests with Parliament.

The *Industries Assistance Commission Amendment Act 1984* abolished the Temporary Assistance Authority. Henceforth, the Commission is to be responsible for conducting all temporary assistance inquiries which are concerned with the question of whether urgent action is necessary to provide assistance to any industry experiencing difficulties. A separate set of guidelines are to apply to such inquiries and the Commission must hold a public hearing and submit its report within 45 days of receipt of a temporary assistance reference.

### *Bureau of Industry Economics*

The Bureau of Industry Economics has been established by the Australian Government as a centre for research into the manufacturing and commerce sectors. Formally attached to the Department of Industry, Technology and Commerce, it has professional independence in the conduct and reporting of its research.

The major objectives of the Bureau are to:

- carry out research work needed to assist the Government in the formation of industrial policy
- assist the Industries Assistance Commission and other government bodies by making submissions on the results of its research
- attract a high standard of professional staff and publish its research findings
- complement the work of other research agencies and co-operate with universities and colleges in developing research programs.

Activities coming within the Bureau's research area include manufacturing, wholesale and retail trade and personal and business services. These currently contribute well over 50 per cent of gross domestic product in Australia and absorb an even larger share of the labour force.

The Bureau is also concerned with developments in mining, rural industry, public and private services and international trade and investment where these impinge on the manufacturing and commerce sectors.

A Council of Advice advises the Minister of Industry, Technology and Commerce about the Bureau's work and ensures that it is relevant to contemporary and long term issues in manufacturing and commerce. Its members are drawn from a wide range of industries and backgrounds, including the universities and the trade union movement. The Council assists with the work of the Bureau and the effective dissemination of the results of the Bureau's work.

As well as conducting longer-term research, the Bureau provides the Minister for Industry, Technology and Commerce with regular briefings on economic trends. It also undertakes short-term projects of immediate relevance. The techniques of economic analysis used include supply and demand estimation, industry structure-performance relationships, input-output analysis, econometrics, cost-benefit methods and socio-demographic investigations. Technical and social factors affecting industry structure and performance are also taken into account in investigations.

The staff of the Bureau consists of approximately 60 officers with backgrounds in business, government and university teaching and research.

Research projects often require special surveys where existing data sources are inadequate or more detailed information is required for particular industries. In certain projects the Bureau undertakes joint research with other organisations and consultants are engaged where this will significantly enhance the quality of the research.

Current research areas include:

- the aerospace industry
- the chemicals industry
- corporate taxation
- small business
- productivity
- industrial development policies

- structural adjustment in heavy engineering
- investment behaviour in manufacturing
- trade relations with north-east Asia.

The results of the Bureau's research are published in working papers, which generally address more technical issues or present preliminary results; information bulletins which contain statistics and other information and research reports which give comprehensive results of the Bureau's major projects. In addition the Bureau publishes conference proceedings, contributed papers from people outside the Bureau and submissions to other Government organisations.

### Standardisation

The *Commonwealth Scientific and Industrial Research Organization* (CSIRO) is obliged by two Acts of Parliament to be associated with national standards. The functions of CSIRO as laid down by these Acts involve establishing, developing and maintaining standards of measurement of physical quantities and to promote the use of these standards.

CSIRO first undertook this role in 1938 after government acceptance of a recommendation by a Secondary Industries Testing and Research Committee that these functions were essential for the successful development of manufacturing industry in Australia. Since that time, standards and calibrations have been established for a very wide range of physical quantities, extending considerably beyond the minimum required by law. From 1978, CSIRO has been responsible for first level calibrations in the defence area.

In certain specialist areas, CSIRO has authorised other bodies to carry out functions related to standards. CSIRO has authorised the *Australian Atomic Energy Commission* (Department of Resources and Energy) and the *Australian Radiation Laboratory* (Department of Health) to maintain standards for quantities relating to ionising radiations, such as radioactivity, exposure, and absorbed dose. It has also authorised the *Division of National Mapping* (Department of Resources and Energy) and the *Australian Telecommunications Commission* (Department of Communications) to maintain working standards of time interval and frequency.

At the international level, a treaty now widely known as the Metric Treaty has been signed by 45 member nations, including Australia. The *International Bureau of Weights and Measures* (BIPM) coordinates activities under the Treaty by providing a mechanism for making international agreements in scientific metrology and for coordinating research on basic scientific problems in measurement. The CSIRO has representatives on five of the BIPM's consultative Committees, while the *Australian Radiation Laboratory* and the *Australian Atomic Energy Commission* (as CSIRO agents) are represented on another consultative Committee.

The *Standards Association of Australia* is the organisation responsible for the preparation, on a national basis, of Australian standards for materials and products and standard codes of practice.

Formed as the Australian Commonwealth Engineering Standards Association in 1922, it was reconstituted as the Standards Association of Australia in 1929, and was incorporated by Royal Charter in 1950. It is an independent body having the full recognition and support of the Commonwealth and State Governments and of industry. Approximately half its funds are provided by Commonwealth Government grant, the remainder coming primarily from membership subscriptions and from the sale of publications. Organisations, companies, and individuals are eligible for subscribing membership.

The Association is controlled by a Council comprising representatives from Commonwealth and State Governments and their departments, from associations of manufacturing and commercial interests, and from professional institutions. Standards are prepared by committees composed of expert representatives from the interests associated with the subject under consideration. This assistance is on a voluntary basis.

Preparation of a standard is undertaken in response to a request from any responsible source, subject to verification that the standard will meet a genuine need. Standards may relate to one or more of several aspects of industrial practice such as terminology, test methods, dimensions, specifications of performance and quality of products, and safety or design codes. In general, standards derive authority from voluntary adoption based on their intrinsic merit, but in many cases where safety of life or property or consumer protection is involved, they may have compulsory application through statutory reference.

The Association is the owner of a registered certification trade mark covering conformity of products to standards. Manufacturers of products covered by Australian standards may



obtain a licence to use the Australian Standard Mark, under conditions established by the Association.

The Association has international affiliations and is a member, representing Australia, of the International Organization for Standardization (ISO) and of the International Electrotechnical Commission (IEC). Close links are maintained with overseas standards organisations, and the Association acts as Australian agent for the procurement of ISO and IEC publications and the standards of other countries.

The Association has two specialised libraries, one in Sydney and one in Melbourne, containing the national standards of all countries with standards organisations. These libraries provide necessary material for committee work and a free information service to those concerned with standards.

The headquarters office of the Association is in Sydney, and there is a major branch office in Melbourne. Branch offices are located also in other capital cities and at Newcastle, New South Wales.

The *National Standards Commission* was established in 1948 and is presently located at North Ryde, Sydney. The original purpose was to advise the Minister for Industry, Technology and Commerce on matters relating to weights and measures. It operated under the *Weights and Measures (National Standards) Act 1948*. This was replaced in 1960 with a new Act which took account of advances in measuring technology and its impact in Australia. Amendments to the 1960 Act were made in 1966, 1978 and 1984. The present role of the Commission provides for the establishment and use throughout Australia of uniform units and standards of measurement, physical quantities, the progressive introduction of the metric system as the sole system of measurement of physical quantities in Australia and for the examination and approval of the patterns of measuring instruments used for trade in order to control design and quality. The 1984 amendments also changed the title of the Act to the National Measurement Act.

The Commission has close contacts with all States and Territorial weights and measures authorities who ensure by regular inspections that trade instruments continue to comply with the approved patterns.

Close liaison is also maintained with the manufacturing industry, retailers, consumers and other users to ensure a balance between design, quality and cost.

The Commission has regular contacts overseas and provides the Australian member accredited to the International Organisation of Legal Metrology. The Commission is directed by a board of seven part-time Commissioners.

The *National Association of Testing Authorities* (NATA) organises testing facilities throughout Australia to serve private and governmental needs. Membership is open to authorities whose testing laboratories conform to the standards of staffing and operations defined by the Association. Testing authorities may register their laboratories voluntarily. The Association assesses the competence of the laboratories and ensures that their standards of competence are maintained. Certificates of test issued by registered laboratories may be endorsed in the name of the Association. NATA endorsed test certificates are generally accepted by governmental, industrial and commercial interests.

Laboratories are registered for performance of specific tests in the fields of acoustic and vibration measurement, biological testing, chemical testing, electrical testing, heat and temperature measurement, mechanical testing, medical testing, metrology, non-destructive testing and optics and photometry.

The *Industrial Design Council of Australia* (IDCA) is engaged in activities aimed at encouraging better design in Australian-made goods and fostering a wider appreciation of good design throughout the community. The Council is representative of industry, commerce and government, together with designers and educationists. It is financed by donations from industry and commerce, and by Commonwealth and State Government grants.

The Council's Field Advisory Service has a diagnostic and counselling role, assisting smaller manufacturers throughout Australia with product development policy and direction. Field advisers are based in IDCA State offices in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart.

The Australian Design Award is granted for high-quality products of Australian design and manufacture. An index of these products is held in each State office. These products are also displayed in Australian Design Centres.

Regular contact is maintained with senior executives of manufacturing companies, departmental officers and designers through the Design Delegate program of lectures. Inquirers

seeking professional design services are referred to qualified industrial designers. The Council is also concerned with raising the standard of training in industrial design in co-operation with education authorities.

The Council's National Secretariat is in Melbourne.

The *Australian Standard Commodity Classification* (ASCC) has been developed by the ABS to enable users to compare statistics of commodities produced in Australia with statistics of commodities imported and exported.

The ASCC manual (1207.0 and 1208.0) links production, import and export items at their most detailed level of comparability in the form of standard (ASCC) commodity items. In a large number of cases, however, due to the differences between production, import and export items, comparability is only achieved at fairly broad aggregate levels. In the ASCC, commodities are grouped under industries (as defined in the Australian Standard Industrial Classification (ASIC)) in which they are typically produced.

The first edition of the ASCC was restricted to commodities originating in manufacturing industries. The second edition, which relates to the year 1977-78 was extended to also include commodities originating in the agriculture, forestry, fishing, hunting and mining industries. The latest full edition published is in respect of the year 1982-83 which was released in July 1984. Because of the relatively few changes that occurred in the component items of the ASCC, it was decided not to publish the 1979-80 edition of the ASCC manual.

The classification will continue to be developed over the coming years to improve the alignment between production, imports and exports.

The *Australian Standard Industrial Classification* (ASIC) (1201.0 and 1202.0) was developed by the ABS as part of its program for the integration of economic statistics. Since its introduction by the ABS in the processing of the 1969 Integrated Economic Censuses, the ASIC has gained a wide acceptance by users of statistics outside the ABS and has been progressively applied in most ABS collections and compilations where data are classified by industry.

The ASIC has been devised for the purpose of classifying statistical units by industry. It has been designed primarily as a system for the classification of establishment (e.g. individual mines, factories, shops, etc.) although it may also be used for classifying other economic units such as enterprises.

The fundamental concept of this classification system is that an industry (i.e. an individual class, group, etc.) in the ASIC is composed of establishments that have been classified to it. Each industry class is defined in terms of the predominant activities of the establishment classified to it and these activities are specified in the ASIC as *primary activities* of the individual industry classes. These industry definitions are revised only at relatively infrequent intervals so as to minimise the disruption to time series data assembled on an ASIC basis.

To date the ASIC has been revised twice. The ASIC editions published hitherto are: 1969 (original), 1978 (first revision) and 1983 (second revision)—the latter (the 1983 edition) is the one currently in use.

### **Productivity action**

For information about the Productivity Group Movement and Productivity Promotion Council of Australia see Chapter 25, Science and Technology.

## **Manufacturing industry statistics**

### **Manufacturing industry statistics from 1901 to 1967-68**

A series of substantially uniform statistics exist from 1901 up until 1967-68 when the framework within which manufacturing statistics were collected was changed. Detailed manufacturing statistics in respect of this period are included in Year Book No. 57, pages 721-9, and in earlier issues.

### **Manufacturing industry statistics from 1968-69**

As from the year ended June 1969, the Censuses of Manufacturing, Electricity and Gas have been conducted within the framework of the integrated economic censuses which include the Censuses of Mining, Retail Trade, Wholesale Trade, Construction and Electricity and Gas industries. As a result, manufacturing industry statistics for 1968-69 and subsequent years are not directly comparable with previous years.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, now covers all the operations carried on under the one ownership at a single physical location. The manufacturing establishment

is thus one predominantly engaged in manufacturing, but the data supplied for it now cover (with a few exceptions) all activities at the location. The establishment statistics also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business (enterprise) which owns and operates the establishment.

Census units are classified to industry according to the Australian Standard Industrial Classification (ASIC), described in the ABS publication *Australian Standard Industrial Classification* (1201.0 and 1202.0). The ASIC defines the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of the ASIC has resulted in changes in scope between the integrated economic censuses introduced in 1968-69 and the individual economic censuses conducted in previous years.

In the 1967-68 census there were approximately 62,600 manufacturing establishments (excluding electricity and gas establishments) with employment of 1,276,000. Of these, approximately 35,400, with employment of 1,097,000 would have been included in the 1967-68 census if ASIC had been used.

#### MANUFACTURING ESTABLISHMENTS: SUMMARY OF OPERATIONS, AUSTRALIA, 1968-1969 to 1983-84

Census year	Establishments at 30 June	Average employment over whole year (a)			Wages and salaries (b)	Turn-over	Stocks		Purchases, transfers in and selected expenses	Value added	Fixed capital expenditure less disposals
		Males	Females	Persons			Opening	Closing			
	No.	No.	No.	No.	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1968-69	35,939	927,211	334,066	1,261,277	3,908.1	18,646.5	3,102.5	3,319.6	11,514.9	7,348.8	903.0
1969-70	35,674	950,055	345,578	1,295,633	4,328.7	20,687.6	3,322.8	3,634.7	12,862.3	8,137.1	1,030.7
1970-71				No manufacturing census was conducted in respect of this year.							
1971-72	36,206	953,967	347,672	1,301,639	5,250.0	23,620.4	3,920.1	4,182.5	14,374.8	9,508.1	1,297.8
1972-73	36,437	951,610	345,485	1,297,095	5,820.0	26,352.4	4,187.2	4,306.3	15,963.0	10,508.5	1,244.4
1973-74	37,143	969,338	369,041	1,338,379	7,176.4	31,246.7	4,299.1	5,268.5	19,329.8	12,886.3	1,215.5
1974-75(c)	36,836	931,367	333,440	1,264,807	8,588.0	35,468.0	5,267.2	6,572.2	21,712.3	15,060.7	1,456.4
1974-75(d)	26,973	916,896	328,341	1,245,237	8,533.5	35,133.7	5,241.0	6,542.7	21,522.3	14,913.1	1,445.9
1975-76	27,507	888,523	311,917	1,200,440	9,472.4	39,485.3	6,581.1	7,023.3	23,371.7	16,555.8	1,451.7
1976-77	26,780	876,111	299,720	1,175,831	10,535.8	44,814.3	6,985.1	7,996.8	27,010.0	18,816.1	1,548.0
1977-78(e)	25,998	855,448	290,237	1,145,685	11,151.4	48,210.8	7,880.2	8,510.8	29,087.8	19,753.6	1,871.8
1977-78(f)	26,065	853,966	290,233	1,144,199	11,135.8	48,112.6	7,863.5	8,498.1	28,992.7	19,754.4	1,877.3
1978-79	26,312	852,982	290,909	1,143,891	11,966.4	55,211.3	8,515.4	9,299.6	33,765.4	22,230.1	2,262.8
1979-80	27,430	862,368	291,816	1,154,184	13,357.5	65,354.8	9,287.6	11,126.4	41,579.5	25,614.0	2,186.7
1980-81	27,681	859,217	290,746	1,149,963	14,912.7	73,723.0	11,047.1	12,366.9	46,448.7	28,594.1	2,882.7
1981-82	28,706	862,542	292,266	1,154,808	17,002.8	81,869.3	12,377.4	13,297.3	51,240.4	31,548.7	4,084.2
1982-83	27,696	787,309	265,596	1,052,905	17,403.0	82,321.0	13,094.0	13,035.1	51,226.0	31,035.5	3,678.0
1983-84	27,470	751,199	258,177	1,009,376	17,461.1	88,631.8	12,913.9	13,177.4	54,666.1	34,229.3	2,775.3

(a) Including working proprietors. (b) Excluding the drawings of working proprietors. (c) These data and that of previous years include the data of all manufacturing establishments. (d) These data and those of following years exclude single establishment manufacturing enterprises with fewer than four persons employed. (e) These data and those of previous years are classified to the 1969 (preliminary) edition of ASIC. (f) These data and those of following years are classified to the 1978 edition of ASIC.

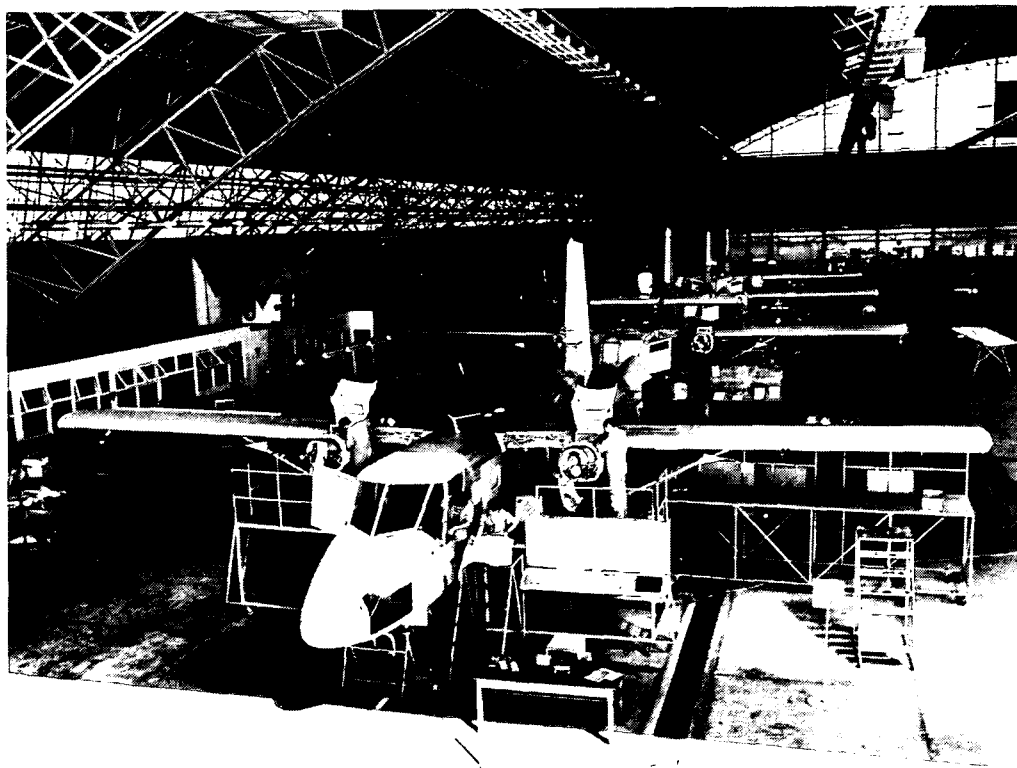
The items of data on the census forms were standardised for all census sectors, which has meant changes in the content of the statistics. For example, the value of 'turnover' is now collected instead of the 'value of output' at the factory, and purchases and selected expenses are collected as well as the value of specified materials, fuels, etc., used. However the underlying concept of 'value added', is similar to the former concept 'value of production', even though its method of derivation is different.

Even though the concept of 'value added' is similar to 'value of production', direct comparison of 1968-69 and previous figures is not possible because of the change in census units already mentioned which has resulted in the 'value added' for the whole establishment being reported, not merely the 'value added' for the manufacturing process. Comparison is also affected, of course, by the change in the scope of the manufacturing census due to the adoption of ASIC. In addition, 'value added' as calculated for the Manufacturing Census differs from the concept used in the National Accounts where the concept of 'value added' also excludes some administrative expenses and sundry charges and the change in stocks component is measured by valuing the physical change in stocks at current prices. It is not practicable in the Manufacturing Census to collect data fully in accord with the National Accounts concept of 'value added'.

For a more detailed description of the Integrated Economic Censuses reference should be made to Year Book No. 56, Chapter 31.

Since the introduction of the system of integrated economic censuses the comparability of manufacturing census data has been affected by two additional changes to collection practices:

- (i) Commencing with the 1975-76 Manufacturing Census, only a limited range of data (i.e. employment and wages and salaries) is collected from single establishment manufacturing enterprises with fewer than four persons employed. This procedure significantly reduced both the statistical reporting obligations of small businesses and the collecting and processing costs of the Australian Bureau of Statistics without affecting the reliability of information for the evaluation of trends in the manufacturing sector of the economy (as these small enterprises contribute only marginally to statistical aggregates). In order to provide a link with past and future years, 1974-75 data was processed on both bases.
- (ii) Commencing with the 1977-78 census the classification of census units to industry is based on the 1978 edition of the ASIC which replaces the 1969 preliminary edition in use since the 1968-69 census. In general the impact of the change in industrial classification is minimal at the ASIC Division and Subdivision levels.
- (iii) From 1983-84, the classification of census units to industry is based on the 1983 edition of the ASIC. The only changes to manufacturing resulting from use of the revised version of the ASIC relate to establishments mainly engaged in minor repairs to aircraft or railway or tramway rolling stock. Previously, these establishments were excluded from manufacturing but are now included in industry subdivision 32—Transport Equipment.



Assembly line for Nomad aircraft at the Government Aircraft Factory, Avalon, Victoria.

*Australian Information Service*

## Multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed

Main structural aggregates relating to number of establishments, employment, wages and salaries, turnover, purchases, transfers in and selected expenses, stocks, and value added are shown in the following tables. Further detailed statistics are contained in the following ABS statistical publications: *Manufacturing Establishments, Details of Operations by Industry Class, Australia* (8203.0), *Manufacturing Establishments, Summary of Operations by Industry Class, Australia* (8202.0) and *Manufacturing Establishments: Selected Items of Data Classified by Industry and Employment Size, Australia* (8204.0).

### Summary of operations

The following table shows the summary of operations for manufacturing establishments.

**MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS BY INDUSTRY SUB-DIVISION: AUSTRALIA  
1982-83 AND 1983-84**

Industry sub-division ASIC code Description	Establish- ments operating at 30 June No.	Average employment over whole year (a)			Wages and salaries (b) \$ m	Turn- over \$ m	Stocks at 30 June		Purchases, transfers in and selected expenses \$ m	Fixed capital expend- iture less added disposals \$ m	
		Males No.	Females No.	Persons No.			Opening \$ m	Closing \$ m		Value \$ m	less disposals \$ m
1982-83											
21 Food, beverages and tobacco	3,424	125,136	49,402	174,538	2,854	18,507	1,905	2,065	12,763	5,903	594
23 Textiles	628	19,192	13,440	32,632	513	2,147	395	375	1,323	805	57
24 Clothing and footwear	1,969	16,692	53,258	69,950	847	2,917	479	465	1,549	1,355	29
25 Wood, wood products and furniture	4,028	60,152	10,879	71,031	950	3,982	585	567	2,291	1,674	92
26 Paper, paper products, printing and publishing	2,909	71,327	29,407	100,734	1,711	6,484	772	742	3,384	3,072	207
27 Chemical, petroleum and coal products	931	43,512	14,808	58,320	1,144	8,124	1,315	1,443	5,418	2,835	328
28 Non-metallic mineral products	1,712	36,439	4,436	40,875	761	3,705	516	573	2,202	1,560	145
29 Basic metal products	548	76,613	6,387	83,000	1,682	9,431	2,068	1,940	6,803	2,500	1,431
31 Fabricated metal products	4,272	84,089	17,690	101,779	1,584	6,424	1,074	957	3,656	2,650	147
32 Transport equipment	1,300	107,099	13,949	121,048	2,140	8,041	1,348	1,413	4,814	3,292	300
33 Other machinery and equipment	3,766	106,757	33,396	140,153	2,309	8,585	2,027	1,895	4,649	3,804	213
34 Miscellaneous manufacturing	2,209	40,301	18,544	58,845	907	3,972	611	600	2,375	1,587	135
<b>Total manufacturing</b>	<b>27,696</b>	<b>787,309</b>	<b>265,596</b>	<b>1,052,905</b>	<b>17,403</b>	<b>82,321</b>	<b>13,094</b>	<b>13,035</b>	<b>51,226</b>	<b>31,036</b>	<b>3,678</b>
1983-84											
21 Food, beverages and tobacco	3,434	120,831	48,655	169,486	2,904	19,741	2,051	2,190	13,369	6,512	524
23 Textiles	630	19,271	12,906	32,177	534	2,332	369	394	1,459	898	53
24 Clothing and footwear	1,941	17,178	54,331	71,509	916	3,256	458	522	1,771	1,549	41
25 Wood, wood products and furniture	3,974	59,450	10,587	70,037	1,005	4,417	547	601	2,515	1,957	78
26 Paper, paper products, printing and publishing	2,911	70,239	29,043	99,282	1,771	7,089	721	732	3,719	3,381	182
27 Chemical, petroleum and coal products	910	41,514	14,298	55,812	1,199	8,908	1,424	1,454	5,832	3,106	266
28 Non-metallic mineral products	1,713	34,051	4,149	38,200	741	4,070	566	537	2,310	1,731	154
29 Basic metal products	533	71,273	5,800	77,073	1,646	10,855	1,951	2,019	7,565	3,357	775
31 Fabricated metal products	4,165	77,526	16,580	94,106	1,543	6,522	930	1,011	3,823	2,780	123
32 Transport equipment	1,290	103,441	13,374	116,815	2,108	8,503	1,419	1,252	5,011	3,325	270
33 Other machinery and equipment	3,771	96,870	30,500	127,370	2,165	8,540	1,867	1,821	4,650	3,845	171
34 Miscellaneous manufacturing	2,198	39,555	17,954	57,509	930	4,397	610	644	2,643	1,789	140
<b>Total manufacturing</b>	<b>27,470</b>	<b>751,199</b>	<b>258,177</b>	<b>1,009,376</b>	<b>17,461</b>	<b>88,632</b>	<b>12,914</b>	<b>13,177</b>	<b>54,666</b>	<b>34,229</b>	<b>2,775</b>

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

### Employment

The statistics on the number of persons employed shown in the following table relate to the average whole year employment, including working proprietors and those persons working at separately located administrative offices and ancillary units in the State.

It should be noted that persons employed in each State (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in that State, even though the administrative offices or ancillary units may have served establishments located in another State.

**MANUFACTURING ESTABLISHMENTS—MALES, FEMALES AND PERSONS EMPLOYED BY INDUSTRY SUB-DIVISION, 1983-84, AND TOTAL MANUFACTURING 1981-82 TO 1983-84**

Industry sub-division											
ASIC code	Description	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
<b>MALES EMPLOYED</b>											
21	Food, beverages and tobacco . . .	36,909	35,241	24,779	11,212	8,114	3,825	407	344	120,831	
23	Textiles . . . . .	5,141	10,875	602	1,483	467	n.p.	n.p.	n.p.	19,271	
24	Clothing and footwear . . . . .	4,460	10,701	586	1,045	279	96	9	2	17,178	
25	Wood, wood products and furniture . . . . .	19,150	15,341	9,665	6,097	5,857	2,850	88	402	59,450	
26	Paper, paper products, printing and publishing . . . . .	23,359	24,518	7,160	5,123	4,601	4,343	187	948	70,239	
27	Chemical, petroleum and coal products . . . . .	18,243	15,154	2,488	2,175	2,654	n.p.	n.p.	—	41,514	
28	Non-metallic mineral products . . . . .	11,918	9,014	5,556	2,689	3,760	766	203	145	34,051	
29	Basic metal products . . . . .	36,884	11,511	6,304	7,170	5,452	3,221	n.p.	n.p.	71,273	
31	Fabricated metal products . . . . .	28,684	24,629	10,008	5,604	6,641	1,368	n.p.	n.p.	77,526	
32	Transport equipment . . . . .	28,983	44,081	11,086	14,096	4,316	792	48	39	103,441	
33	Other machinery and equipment . . . . .	41,481	31,940	7,272	9,667	5,761	577	35	137	96,870	
34	Miscellaneous manufacturing . . . . .	13,953	16,134	3,254	4,021	1,817	308	41	27	39,555	
	<b>Total manufacturing</b>										
	1983-84 . . . . .	269,165	249,139	88,760	70,382	49,719	19,640	1,921	2,473	751,199	
	1982-83 . . . . .	285,945	257,870	92,389	74,843	52,265	19,597	1,932	2,468	787,309	
	1981-82 . . . . .	319,468	278,908	99,429	81,408	57,395	21,345	1,962	2,627	862,542	
<b>FEMALES EMPLOYED</b>											
21	Food, beverages and tobacco . . .	15,946	14,642	7,336	4,673	3,662	2,100	165	131	48,655	
23	Textiles . . . . .	3,758	6,700	386	1,092	338	n.p.	n.p.	n.p.	12,906	
24	Clothing and footwear . . . . .	15,597	31,735	2,659	2,959	1,191	131	28	31	54,331	
25	Wood, wood products and furniture . . . . .	3,625	2,944	1,687	958	1,070	229	13	61	10,587	
26	Paper, paper products, printing and publishing . . . . .	10,971	9,841	3,010	1,922	2,094	672	116	417	29,043	
27	Chemical, petroleum and coal products . . . . .	8,540	4,511	414	405	355	n.p.	n.p.	—	14,298	
28	Non-metallic mineral products . . . . .	1,625	1,357	467	266	351	48	27	8	4,149	
29	Basic metal products . . . . .	2,907	1,354	444	503	404	104	n.p.	n.p.	5,800	
31	Fabricated metal products . . . . .	6,571	5,581	1,969	1,202	979	178	n.p.	n.p.	16,580	
32	Transport equipment . . . . .	2,728	8,360	584	1,369	218	102	8	5	13,374	
33	Other machinery and equipment . . . . .	14,754	10,193	1,404	2,980	1,028	84	26	31	30,500	
34	Miscellaneous manufacturing . . . . .	7,113	6,891	1,318	1,947	588	70	9	18	17,954	
	<b>Total manufacturing</b>										
	1983-84 . . . . .	94,135	104,109	21,678	20,276	12,278	4,416	511	774	258,177	
	1982-83 . . . . .	98,663	105,148	22,257	21,063	12,715	4,488	502	760	265,596	
	1981-82 . . . . .	112,456	113,829	23,288	23,474	13,404	4,464	527	824	292,266	
<b>PERSONS EMPLOYED</b>											
21	Food, beverages and tobacco . . .	52,855	49,883	32,115	15,885	11,776	5,925	572	475	169,486	
23	Textiles . . . . .	8,899	17,575	988	2,575	805	n.p.	n.p.	n.p.	32,177	
24	Clothing and footwear . . . . .	20,057	42,436	3,245	4,004	1,470	227	37	33	71,509	
25	Wood, wood products and furniture . . . . .	22,775	18,285	11,352	7,055	6,927	3,079	101	463	70,037	
26	Paper, paper products, printing and publishing . . . . .	34,330	34,359	10,170	7,045	6,695	5,015	303	1,365	99,282	
27	Chemical, petroleum and coal products . . . . .	26,783	19,665	2,902	2,580	3,009	n.p.	n.p.	—	55,812	
28	Non-metallic mineral products . . . . .	13,543	10,371	6,023	2,955	4,111	814	230	153	38,200	
29	Basic metal products . . . . .	39,791	12,865	6,748	7,673	5,856	3,325	n.p.	n.p.	77,073	
31	Fabricated metal products . . . . .	35,255	30,210	11,977	6,806	7,620	1,546	n.p.	n.p.	94,106	
32	Transport equipment . . . . .	31,711	52,441	11,670	15,465	4,534	894	56	44	116,815	
33	Other machinery and equipment . . . . .	56,235	42,133	8,676	12,647	6,789	661	61	168	127,370	
34	Miscellaneous manufacturing . . . . .	21,066	23,025	4,572	5,968	2,405	378	50	45	57,509	
	<b>Total manufacturing</b>										
	1983-84 . . . . .	363,300	353,248	110,438	90,658	61,997	24,056	2,432	3,247	1,009,376	
	1982-83 . . . . .	384,608	363,018	114,646	95,906	64,980	24,085	2,434	3,228	1,052,905	
	1981-82 . . . . .	431,924	392,737	122,717	104,882	70,799	25,809	2,489	3,451	1,154,808	

### Wages and salaries

The following table shows wages and salaries of all employees of manufacturing establishments including those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

**MANUFACTURING ESTABLISHMENTS—WAGES AND SALARIES BY INDUSTRY  
SUB-DIVISION, 1983-84 AND TOTAL MANUFACTURING 1981-82 TO 1983-84  
(\$ million)**

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
21	Food, beverages and tobacco . . . . .	972	881	534	234	183	81	12	8	2,904
23	Textiles . . . . .	154	296	13	38	12	n.p.	n.p.	n.p.	534
24	Clothing and footwear . . . . .	248	558	38	52	16	3	n.p.	n.p.	916
25	Wood, wood products and furniture . . . . .	335	262	153	102	93	50	1	8	1,005
26	Paper, paper products, printing and publishing . . . . .	645	609	167	114	107	98	5	26	1,771
27	Chemical, petroleum and coal products . . . . .	577	419	62	54	68	n.p.	n.p.	—	1,199
28	Non-metallic mineral products . . . . .	267	207	112	58	74	15	4	3	741
29	Basic metal products . . . . .	843	281	141	156	139	n.p.	n.p.	n.p.	1,646
31	Fabricated metal products . . . . .	586	505	187	103	126	23	n.p.	n.p.	1,543
32	Transport equipment . . . . .	593	958	198	269	76	13	1	1	2,108
33	Other machinery and equipment . . . . .	988	704	143	202	115	11	1	3	2,165
34	Miscellaneous manufacturing . . . . .	349	380	65	91	37	6	1	1	930
	<b>Total manufacturing</b>									
	1983-84 . . . . .	<b>6,556</b>	<b>6,059</b>	<b>1,813</b>	<b>1,472</b>	<b>1,047</b>	<b>406</b>	<b>49</b>	<b>59</b>	<b>17,461</b>
	1982-83 . . . . .	6,638	5,950	1,786	1,502	1,038	388	45	55	17,403
	1981-82 . . . . .	6,624	5,757	1,700	1,446	1,013	370	42	49	17,003

### Turnover

The following table shows the value of turnover of manufacturing establishments. The figures include sales of goods whether produced by the establishment or not, transfers out of goods to other establishments of the same enterprise; bounties and subsidies on production; plus all other operating revenue from outside the enterprise (such as commission, repair and service revenue and rent, leasing and hiring revenue), plus capital work done for own use, or for rental or lease. Receipts from interest, royalties, dividends, and the sale of fixed tangible assets are excluded.

**MANUFACTURING ESTABLISHMENTS—TURNOVER, BY INDUSTRY  
SUB-DIVISION, 1983-84 AND TOTAL MANUFACTURING 1981-82 TO 1983-84  
(\$ million)**

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
21	Food, beverages and tobacco . . . . .	5,886	6,266	3,849	1,604	1,400	641	51	45	19,741
23	Textiles . . . . .	720	1,219	95	174	49	n.p.	n.p.	n.p.	2,332
24	Clothing and footwear . . . . .	996	1,926	102	172	48	10	n.p.	n.p.	3,256
25	Wood, wood products and furniture . . . . .	1,489	1,114	634	459	396	283	7	34	4,417
26	Paper, paper products, printing and publishing . . . . .	2,654	2,498	646	442	332	422	17	77	7,089
27	Chemical, petroleum and coal products . . . . .	3,746	2,668	1,603	319	466	n.p.	n.p.	—	8,908
28	Non-metallic mineral products . . . . .	1,405	1,000	752	348	401	92	42	30	4,070
29	Basic metal products . . . . .	4,572	2,116	1,316	798	1,466	n.p.	n.p.	n.p.	10,855
31	Fabricated metal products . . . . .	2,407	2,037	884	467	541	92	n.p.	n.p.	6,522
32	Transport equipment . . . . .	1,842	4,269	943	1,171	224	49	3	3	8,503
33	Other machinery and equipment . . . . .	3,684	3,055	547	788	425	29	4	9	8,540
34	Miscellaneous manufacturing . . . . .	1,549	1,911	335	396	176	26	2	2	4,397
	<b>Total manufacturing</b>									
	1983-84 . . . . .	<b>30,950</b>	<b>30,081</b>	<b>11,706</b>	<b>7,137</b>	<b>5,923</b>	<b>2,196</b>	<b>359</b>	<b>280</b>	<b>88,632</b>
	1982-83 . . . . .	29,024	27,747	10,715	6,708	5,597	1,969	344	217	82,321
	1981-82 . . . . .	29,545	27,208	10,590	6,652	5,491	1,898	297	188	81,869

**Purchases, transfers in and selected expenses**

The following table gives details of the value of purchases, transfers in and selected expenses. Figures include purchases of materials, fuels, power, containers, etc. and goods for resale, plus transfers in of goods from other establishments of the enterprise, plus charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses, sales commission payments and rent, leasing and hiring expenses.

**MANUFACTURING ESTABLISHMENTS—PURCHASES, TRANSFERS IN AND SELECTED EXPENSES, BY INDUSTRY SUB-DIVISION, 1983-84 AND TOTAL MANUFACTURING 1981-82 TO 1983-84**  
(**\$ million**)

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
21	Food, beverages and tobacco . . . . .	3,881	4,198	2,692	1,095	994	445	33	31	13,369
23	Textiles . . . . .	448	741	72	123	28	n.p.	n.p.	n.p.	1,459
24	Clothing and footwear . . . . .	586	1,030	48	78	23	5	n.p.	n.p.	1,771
25	Wood, wood products and furniture . . . . .	869	628	344	270	222	160	4	19	2,515
26	Paper, paper products, printing and publishing . . . . .	1,387	1,325	326	228	164	244	6	38	3,719
27	Chemical, petroleum and coal products . . . . .	2,217	1,619	1,421	188	319	n.p.	n.p.	—	5,832
28	Non-metallic mineral products . . . . .	824	515	454	188	228	50	29	22	2,310
29	Basic metal products . . . . .	2,968	1,592	995	520	1,076	n.p.	n.p.	n.p.	7,565
31	Fabricated metal products . . . . .	1,404	1,137	550	287	317	54	n.p.	n.p.	3,823
32	Transport equipment . . . . .	855	2,760	594	671	108	19	2	2	5,011
33	Other machinery and equipment . . . . .	1,975	1,702	296	416	241	13	2	5	4,650
34	Miscellaneous manufacturing . . . . .	925	1,156	210	228	108	14	1	1	2,643
	<b>Total manufacturing</b>									
	1983-84 . . . . .	18,336	18,405	8,002	4,292	3,828	1,374	249	181	54,666
	1982 83 . . . . .	17,520	17,060	7,393	4,041	3,574	1,260	251	126	51,226
	1981 82 . . . . .	17,896	16,904	7,300	4,059	3,501	1,237	231	112	51,240

**Stocks**

Statistics on the value of opening and closing stocks at 30 June are shown in the following table. Figures include all the stocks of materials, fuels, etc., and finished goods and work-in-progress of the establishment whether located at the establishment or elsewhere.

**MANUFACTURING ESTABLISHMENTS—OPENING AND CLOSING STOCKS BY INDUSTRY SUB-DIVISION, 1983-84 AND TOTAL MANUFACTURING 1981-82 TO 1983-84**  
(**\$ million**)

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>OPENING STOCKS AT 30 JUNE</b>										
21	Food, beverages and tobacco . . . . .	611	741	242	282	101	70	4	1	2,051
23	Textiles . . . . .	120	192	12	28	6	n.p.	n.p.	n.p.	369
24	Clothing and footwear . . . . .	128	280	10	35	4	1	n.p.	n.p.	458
25	Wood, wood products and furniture . . . . .	182	136	73	49	59	43	1	3	547
26	Paper, paper products, printing and publishing . . . . .	261	285	59	43	24	41	1	6	721
27	Chemical, petroleum and coal products . . . . .	646	420	209	57	73	n.p.	n.p.	—	1,424
28	Non-metallic mineral products . . . . .	210	132	101	42	63	14	2	2	566
29	Basic metal products . . . . .	877	258	291	174	207	n.p.	n.p.	n.p.	1,951
31	Fabricated metal products . . . . .	347	306	102	52	60	16	n.p.	n.p.	930
32	Transport equipment . . . . .	316	709	150	192	34	17	—	—	1,419
33	Other machinery and equipment . . . . .	808	720	112	126	95	4	—	1	1,867
34	Miscellaneous manufacturing . . . . .	229	266	40	52	20	3	—	—	610
	<b>Total manufacturing</b>									
	1983-84 . . . . .	4,734	4,444	1,401	1,130	747	319	76	62	12,914
	1982 83 . . . . .	4,978	4,480	1,297	1,129	738	342	83	48	13,094
	1981 82 . . . . .	4,854	4,200	1,154	1,101	673	298	83	14	12,377



MANUFACTURING ESTABLISHMENTS—OPENING AND CLOSING STOCKS BY INDUSTRY  
SUB-DIVISION, 1983-84 AND TOTAL MANUFACTURING 1981-82 TO 1983-84—*continued*  
(\$ million)

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>CLOSING STOCKS AT 30 JUNE</b>										
21	Food, beverages and tobacco . . . . .	666	764	254	308	116	74	7	1	2,190
23	Textiles . . . . .	124	211	10	30	7	n.p.	n.p.	n.p.	394
24	Clothing and footwear . . . . .	148	320	14	34	5	1	n.p.	n.p.	522
25	Wood, wood products and furniture . . . . .	204	154	76	55	62	44	1	4	601
26	Paper, paper products, printing and publishing . . . . .	259	286	58	47	31	45	1	5	732
27	Chemical, petroleum and coal products . . . . .	648	463	208	48	66	n.p.	n.p.	—	1,454
28	Non-metallic mineral products . . . . .	205	119	97	38	62	12	2	2	537
29	Basic metal products . . . . .	904	268	299	166	239	n.p.	n.p.	n.p.	2,019
31	Fabricated metal products . . . . .	371	324	112	61	59	14	n.p.	n.p.	1,011
32	Transport equipment . . . . .	262	677	126	142	32	13	—	—	1,252
33	Other machinery and equipment . . . . .	802	686	103	138	86	4	—	1	1,821
34	Miscellaneous manufacturing . . . . .	242	273	42	61	22	3	—	—	644
	<b>Total manufacturing</b>									
	1983-84 . . . . .	<b>4,834</b>	<b>4,546</b>	<b>1,397</b>	<b>1,127</b>	<b>788</b>	<b>326</b>	<b>77</b>	<b>82</b>	<b>13,177</b>
	1982 83 . . . . .	4,784	4,442	1,420	1,171	756	329	81	52	13,035
	1981 82 . . . . .	5,051	4,583	1,328	1,154	736	350	78	17	13,297

**Value added**

The statistics on 'value added' contained in the following table have been calculated by adding to the value of turnover the increase (or deducting the decrease) in the value of stocks, and deducting the value of purchases, transfers in and selected expenses. A more detailed description of the method of deriving 'value added' is given on page . . . . .

MANUFACTURING ESTABLISHMENTS—VALUE ADDED, BY INDUSTRY SUB-DIVISION, 1983-84 AND  
TOTAL MANUFACTURING, 1981-82 TO 1983-84  
(\$ million)

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
21	Food, beverages and tobacco . . . . .	2,061	2,092	1,169	534	421	200	21	14	6,512
23	Textiles . . . . .	276	497	21	53	22	n.p.	n.p.	n.p.	898
24	Clothing and footwear . . . . .	431	937	58	92	26	4	n.p.	n.p.	1,549
25	Wood, wood products and furniture . . . . .	644	505	293	195	177	124	3	16	1,957
26	Paper, paper products, printing and publishing . . . . .	1,265	1,174	318	218	175	183	12	37	3,381
27	Chemical, petroleum and coal products . . . . .	1,531	1,093	180	122	140	n.p.	n.p.	—	3,106
28	Non-metallic mineral products . . . . .	576	473	294	155	172	39	13	9	1,731
29	Basic metal products . . . . .	1,630	534	330	271	422	n.p.	n.p.	n.p.	3,357
31	Fabricated metal products . . . . .	1,027	918	344	189	223	36	n.p.	n.p.	2,780
32	Transport equipment . . . . .	933	1,476	324	450	114	26	1	1	3,325
33	Other machinery and equipment . . . . .	1,702	1,319	242	385	176	16	2	4	3,845
34	Miscellaneous manufacturing . . . . .	638	761	128	177	70	12	1	1	1,789
	<b>Total manufacturing</b>									
	1983-84 . . . . .	<b>12,713</b>	<b>11,779</b>	<b>3,701</b>	<b>2,842</b>	<b>2,137</b>	<b>829</b>	<b>110</b>	<b>119</b>	<b>34,229</b>
	1982 83 . . . . .	11,309	10,650	3,445	2,709	2,041	695	91	97	31,036
	1981 82 . . . . .	11,846	10,687	3,464	2,646	2,053	713	61	78	31,549

**Number of establishments**

The following table shows the number of establishments in each State in operation at 30 June for the years indicated. These figures relate to manufacturing establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

**MANUFACTURING ESTABLISHMENTS—NUMBER OF ESTABLISHMENTS IN OPERATION AT  
30 JUNE 1984 BY INDUSTRY SUB-DIVISION, AND TOTAL MANUFACTURING 1981-82 TO 1983-84**

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
21	Food, beverages and tobacco . . . . .	1,005	991	571	359	361	118	19	10	3,434
23	Textiles . . . . .	210	295	45	37	31	10	1	1	630
24	Clothing and footwear . . . . .	749	932	95	84	68	7	3	3	1,941
25	Wood, wood products and furniture . . . . .	1,367	1,086	621	313	414	131	12	30	3,974
26	Paper, paper products, printing and publishing . . . . .	1,248	889	267	193	210	46	14	44	2,911
27	Chemical, petroleum and coal products . . . . .	413	288	73	48	73	14	1	—	910
28	Non-metallic mineral products . . . . .	567	390	342	124	209	48	18	15	1,713
29	Basic metal products . . . . .	201	177	60	38	40	11	4	2	533
31	Fabricated metal products . . . . .	1,683	1,079	580	319	386	85	18	15	4,165
32	Transport equipment . . . . .	407	381	212	119	141	20	5	5	1,290
33	Other machinery and equipment . . . . .	1,581	1,162	340	309	314	38	12	15	3,771
34	Miscellaneous manufacturing . . . . .	847	734	245	167	161	28	8	8	2,198
	<b>Total manufacturing</b>									
	1983-84 . . . . .	10,278	8,404	3,451	2,110	2,408	556	115	148	27,470
	1982-83 . . . . .	10,471	8,392	3,440	2,099	2,499	528	117	150	27,696
	1981-82 . . . . .	10,625	8,916	3,555	2,220	2,603	555	106	126	28,706

### Single establishment manufacturing enterprises with less than four persons employed

#### Summary of operations

The following table shows the summary of operations for single establishment manufacturing enterprises with fewer than four persons employed.

**SINGLE ESTABLISHMENT MANUFACTURING ENTERPRISES WITH FEWER THAN FOUR PERSONS  
EMPLOYED: SUMMARY OF OPERATIONS, BY INDUSTRY SUB-DIVISION, AUSTRALIA, 1983-84  
AND TOTAL MANUFACTURING 1981-82 TO 1983-84**

<i>Industry sub-division</i>		<i>Establishments operating at 30 June</i>	<i>Employment at 30 June (a)</i>			<i>Wages and salaries (b)</i>
<i>ASIC code</i>	<i>Description</i>		<i>Males</i>	<i>Females</i>	<i>Persons</i>	
			—No.—			
21	Food, beverages and tobacco . . . . .	787	1,212	603	1,815	9.0
23	Textiles . . . . .	252	318	207	525	3.0
24	Clothing and footwear . . . . .	583	513	662	1,175	5.3
25	Wood, wood products and furniture . . . . .	3,298	5,239	1,300	6,539	29.7
26	Paper, paper products, printing and publishing . . . . .	1,427	1,915	1,110	3,025	19.0
27	Chemical, petroleum and coal products . . . . .	223	319	130	449	3.0
28	Non-metallic mineral products . . . . .	541	853	251	1,104	5.9
29	Basic metal products . . . . .	142	255	46	301	2.0
31	Fabricated metal products . . . . .	2,459	3,935	1,038	4,973	29.9
32	Transport equipment . . . . .	770	1,268	299	1,567	9.5
33	Other machinery and equipment . . . . .	1,900	2,872	1,017	3,889	26.8
34	Miscellaneous manufacturing . . . . .	1,726	2,359	1,032	3,391	16.1
	<b>Total manufacturing</b>					
	1983-84 . . . . .	14,108	21,058	7,695	28,753	159.2
	1982-83 . . . . .	14,587	21,714	7,921	29,635	159.5
	1981-82 . . . . .	14,024	20,956	7,730	28,686	137.3

(a) Includes working proprietors. (b) Excludes the drawings of working proprietors.

### Principal manufacturing commodities

The factory production of certain commodities is shown in the monthly publications of the ABS, and in the annual publication, *Manufacturing Commodities, Selected Principal Articles Produced, Australia (Preliminary)* (8365.0). A more comprehensive list of articles produced is contained in the annual publication, *Manufacturing Commodities, Principal Articles Produced, Australia* (8303.0).

The table following shows the total recorded production of some selected articles manufactured in Australia. A more complete list is published in the ABS publication 8303.0 mentioned above.

**QUANTITIES OF SELECTED ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS:  
AUSTRALIA**

<i>Commodity code</i>	<i>Article</i>	<i>Unit of quantity</i>	<i>1981-82</i>	<i>1982-83</i>	<i>1983-84p</i>
	<b>Acid (in terms of 100%)—</b>				
401.29	Hydrochloric . . . . .	tonnes	54,554	60,959	58,935
401.37	Nitric . . . . .	"	193,337	190,048	189,922
401.57	Sulphuric . . . . .	'000 tonnes	2,039	1,734	1,706
171.03, 04, 07, 08	Aerated and carbonated waters . . . . .	kL	1,006,367	1,009,457	1,009,606
	<b>Air-conditioning equipment—</b>				
657.03, 05	Room air conditioners (refrigerated) . . . . .	No.	n.p.	34,567	n.p.
657.13, 15	Room air coolers (evaporative coolers) . . . . .	"	n.p.	151,404	133,184
657.21, 22, 23	Packaged unit air conditioners . . . . .	"	n.p.	22,577	15,603
	<b>Animal feeds—</b>				
	From wheat—				
152.06	Pollard . . . . .	'000 tonnes	229	206	232
159.11	Poultry pellets and crumbles . . . . .	"	1,346	1,402	1,385
159.15	Poultry mash . . . . .	"	187	176	143
159.01	Canned dog and cat food . . . . .	tonnes	174,079	189,975	n.p.
159.02	Dog biscuits (whole) . . . . .	"	11,773	23,084	n.y.a.
159.03	Other manufactured dog and cat food . . . . .	"	104,611	101,605	112,500
	<b>Audio cassettes—</b>				
647.98	Pre-recorded . . . . .	'000	17,622	14,904	16,388
647.99	Blank . . . . .	"	2,135	1,921	n.p.
	<b>Bags, leather, fibre, etc.—</b>				
	Handbags—				
864.31	Leather . . . . .	"	325	210	238
864.11-19	Suitcases, kitbags and trunks . . . . .	"	319	n.p.	171
	<b>Bath heaters—</b>				
654.31	Electric . . . . .	No.	4,137	2,654	2,631
779.02-37	Bathing suits(a) . . . . .	'000	6,336	4,560	4,190
	<b>Baths (exclude infants' baths)—</b>				
671.02	Pressed steel—Enamelled, stainless or galvanised . . . . .	"	142	n.p.	n.p.
671.08	Plastic (include fibreglass) . . . . .	"	37	n.p.	26
	<b>Batteries, wet cell type—</b>				
685.13	Auto (S.L.I.) 6 volts . . . . .	"	200	154	145
685.17	Auto (S.L.I.) 12 volts . . . . .	"	2,553	2,398	2,753
		No. of			
685.33, 35	Radio, homelighter, fencer . . . . .	2 volt cells	19,930	n.p.	n.p.
685.43-65	Traction, plant and other . . . . .	"	197,365	184,863	237,924
172.02, 04, 06	Beer(b) . . . . .	ML	1,968	1,972	1,873
064.21	Biscuits . . . . .	tonnes	131,628	129,119	132,261
386.07-23	Blankets, woollen—Pure and mixtures . . . . .	'000	961	850	732
152.02	Bran (wheaten) . . . . .	'000 tonnes	90	93	91
172.21	Brandy . . . . .	kL	2,858	1,504	2,091
777.41, 49	Brassieres . . . . .	'000	7,848	7,248	8,295
066.01, 05	Breakfast food, cereal (ready to eat) . . . . .	tonnes	84,945	80,301	86,798
471.91, 93, 98	Bricks, clay . . . . .	million	2,234	1,694	1,771
261.41	Briquettes, brown coal . . . . .	'000 tonnes	993	760	746
051.30, 052.20					
	Butter—from cream (exclude whey cream) . . . . .	tonnes	74,983	75,777	107,059
773.51, 53, 74, 75, 83	<b>Cardigans, jumpers, etc.</b> . . . . .	'000	21,180	21,072	21,845
474.02	Cement, Portland . . . . .	'000 tonnes	6,136	5,350	4,655
053.01, 11, 21, 31	Cheese (non-processed) . . . . .	tonnes	154,344	154,066	163,249
	<b>Cloth (including mixtures)—</b>				
384.89-99	Cotton(c) . . . . .	'000m <sup>2</sup>	28,315	22,776	23,597
384.47-87	Synthetic (non-cellulosic) . . . . .	"	129,490	125,658	54,827
372.02-50	Wool (excluding blanketing and rug) . . . . .	"	8,488	10,353	9,795
435.22	Coke—Metallurgical . . . . .	'000 tonnes	4,283	3,338	3,181
475.90	Concrete, ready mixed . . . . .	'000m <sup>3</sup>	13,596	11,400	11,865
	<b>Confectionery—</b>				
104.02-18	Chocolate . . . . .	tonnes	65,331	83,178	86,655
104.21-29	Other . . . . .	"	60,071	57,489	60,491
452.04	Copper, refined(d) . . . . .	'000 tonnes	163	172	166

(a) Includes swim shorts. Excludes infants' and babies' swimwear. (b) Excludes waste beer and beverages with alcohol content of 1.15% or less. (c) Excludes tyre-cord fabric and towelling. (d) Primary origin only. Source—Bureau of Mineral Resources.

QUANTITIES OF SELECTED ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS:  
AUSTRALIA—*continued*

Commodity code	Article	Unit of quantity	1981-82	1982-83	1983-84p
171.06, 10	Cordials and syrups . . . . .	kL	131,780	140,835	123,905
777.01-29	Corsets and corselets . . . . .	'000	1,756	1,558	1,468
804.01	Dentifrices (toothpaste) . . . . .	tonnes	7,080	6,313	5,099
499.42	Electricity . . . . .	mil. kWh	104,975	105,933	111,696
523.76-78	Electrodes for manual welding . . . . .	tonnes	23,464	20,800	18,785
	Essences, flavouring—				
139.31	Domestic . . . . .	kL	628	763	953
139.35	Industrial . . . . .	"	6,525	7,199	12,869
696.01, 03, 05	Fans, electric (propellor type) . . . . .	No.	598,217	606,114	622,127
	Floorboards—				
332.06	Australian timber . . . . .	m <sup>3</sup>	202,506	136,740	179,056
332.08	Imported timber . . . . .	"	2,277	n.p.	n.p.
	Floor coverings—(a)				
	Tufted carpets, floor rugs, mats and matting of or predominantly of—				
386.63, 68	Man-made fibres . . . . .	'000m <sup>2</sup>	..	19,746	22,030
386.71, 73	Wool or fine animal hair . . . . .	"	..	9,799	11,554
692.21, 23	Floor polishers, electric . . . . .	No.	n.p.	11,038	n.p.
	Flour—				
068.01	Self-raising . . . . .	tonnes	17,607	25,461	20,405
062.01, 32	Wheaten (b) . . . . .	'000 tonnes	1,125	1,098	1,179
	Fruit juices, natural—				
074.61-69,79	Single strength . . . . .	kL	186,511	201,110	210,547
074.76, 89	Concentrated (c) . . . . .	"	25,002	30,309	n.p.
781.06-29	Gloves, work (d) . . . . .	'000 pairs	n.p.	28,824	32,707
127.21	Glucose . . . . .	tonnes	52,052	44,777	71,254
832.57	Golf clubs . . . . .	'000	341,628	257,448	295,394
	Heaters, room—				
651.01, 03	Solid fuel . . . . .	No.	n.p.	10,722	8,307
651.11-20	Electric radiators and fires . . . . .	'000	604	572	559
651.15	Gas fires and space heaters . . . . .	No.	53,156	60,751	64,929
775, 776	Hosiery—				
	Women's (including panty hose) . . . . .	'000 pairs	80,808	94,620	102,963
	Men's . . . . .	"	25,536	25,788	20,138
	Children's and infants' . . . . .	"	15,996	13,200	9,868
051.56, 58, 59	Ice cream (e) . . . . .	kL	213,971	208,714	197,676
051.87, 89, 90	Infants', invalids' and health beverages from cows milk (f) . . . . .	tonnes	29,775	28,291	25,108
	Iron and steel—				
442.04, 08	Pig iron . . . . .	'000 tonnes	6,607	4,990	5,258
442.80-85	Steel ingots (including continuous cast billets) . . . . .	"	7,260	5,392	7,614
442.28	Blooms and slabs (g) . . . . .	"	5,438	3,750	3,981
076.60	Jams (including conserves, jellies, etc.) . . . . .	tonnes	32,070	30,700	29,110
391.04	Lard . . . . .	"	3,028	2,109	2,339
	Lawn mowers—				
699.51	Petrol, rotary . . . . .	No.	311,508	250,941	237,894
699.41, 45, 55, 61	Other types (h) . . . . .	"	n.p.	n.p.	7,523
453.04	Lead refined (i) . . . . .	'000 tonnes	207	212	190
	Leather—				
	Dressed or finished—				
301.43-65	Chrome tanned (including retanned) . . . . .	'000 m <sup>2</sup>	3,673	3,390	3,824
301.31-37, 83-89	Vegetable tanned, by weight . . . . .	tonnes	n.p.	n.p.	1,039
	Lime—				
275.43, 45	Crushed . . . . .	tonnes	n.p.	341,367	419,676
479.18	Hydrated . . . . .	'000 tonnes	167	175	165
479.12	Quick . . . . .	"	446	500	516
802.21	Lipstick . . . . .	tonnes	38	37	38
063.15	Malt (excluding extract) . . . . .	'000 tonnes	558	536	481

(a) Excludes underfelts and products of coir, sisal or other hard fibres (b) Includes wheatmeal for baking, excludes sharps and atta and other flour. (c) Excludes grape must. (d) Excludes fabric liners for dipped gloves but includes moulded or heat-sealed work gloves. (e) Includes ice cream combined with other confections, including those aerated milk-based confections which contain 10% or more butterfat. (f) Includes malted milk and milk sugar (lactose). (g) Primary mills output. (h) Petrol cylinder, electric and hand. (i) Includes lead content of lead alloys from primary sources but excludes lead-silver bullion.

QUANTITIES OF SELECTED ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS:  
AUSTRALIA—continued

Commodity code	Article	Unit of quantity	1981-82	1982-83	1983-84p
121.01	Margarine—				
	Table . . . . .	tonnes	105,282	104,562	108,236
121.06, 08	Other . . . . .	"	42,199	47,326	45,362
	Mattresses—				
844.22, 25, 27	Inner spring . . . . .	'000	708	664	669
844.42, 45, 47	Rubber . . . . .	"	4	n.p.	n.p.
844.52-67	Other . . . . .	"	529	n.p.	n.p.
027.02-77	Meat, canned(a) . . . . .	tonnes	34,658	40,823	36,887
	Meters (domestic)—				
703.11	Water consumption . . . . .	'000	176	197	207
	Milk, condensed, concentrated and evaporated—				
051.25	Full cream, unsweetened . . . . .	tonnes	36,686	35,858	31,448
051.28	Skim . . . . .	"	19,494	21,157	23,804
	Milk powder in powdered form—				
051.71	Full cream . . . . .	"	63,299	58,932	46,662
051.75, 80	Skim . . . . .	"	76,201	88,276	117,678
051.83	Buttermilk or mixed skim and buttermilk . . . . .	"	n.p.	8,290	10,420
503.13-32	Motors, electric (excl. automotive) . . . . .	'000	3,833	2,540	3,339
	Motor vehicles, finished and partly finished—				
581.02-08, 22	Cars . . . . .	No.	285,387	293,805	264,086
581.10-16, 28	Station wagons . . . . .	"	88,432	69,284	66,006
582.04, 31, 06, 32	Utilities and panel vans . . . . .	"	19,271	15,392	11,366
582.07, 47, 48	Trucks and truck-type vehicles . . . . .	"	20,773	16,270	10,838
465.16	Nails, steel . . . . .	tonnes	20,856	16,483	17,467
	Oatmeal and rolled oats—				
062.62	For porridge, etc. . . . .	"	22,962	23,173	22,750
	Paints, etc.—				
	Architectural and decorative(b)—				
	Solvent thinned—				
410.01	Primers and undercoats . . . . .	kL	9,348	8,778	8,708
410.03, 05, 07	Finishing coats . . . . .	"	24,245	22,481	23,060
	Water thinned—				
410.11, 13, 15	Plastic latex . . . . .	"	46,767	45,994	50,284
410.17	Other water based . . . . .	"	3,066	4,152	3,570
410.25	Tinting colours (all types) packed for sale or transfer out . . . . .	"	487	n.p.	n.p.
	Paper—				
351.11	Newsprint . . . . .	'000 tonnes	304	366	365
351.18-79	Other . . . . .	"	706	634	826
352.01	Paperboard(c) . . . . .	"	487	429	356
336.12	Particle board (resin bonded) . . . . .	'000 m <sup>2</sup>	707	572	673
479.22	Plaster of Paris . . . . .	'000 tonnes	480	n.p.	n.p.
479.32, 33	Plaster sheets, non-acoustic . . . . .	'000 m <sup>2</sup>	63,768	51,229	60,312
334.32, 34, 36, 38	Plywood, 1 mm basis . . . . .	"	90,602(d)	61,877(d)	75,132(d)
	Preserves—				
	Fruit—				
076.01-50	Canned or bottled . . . . .	tonnes	204,103	161,241	147,569
074.01	Pulp and puree, single strength . . . . .	"	1,768	1,080	772
	Vegetables—				
094.02-48	Canned or bottled . . . . .	"	138,645	129,610	130,081
092.02, 06, 10, 19	Quick frozen . . . . .	"	200,925	183,658	197,587
	Pyjamas—				
774.27, 29	Men's, youths' and boys', woven (suits only) . . . . .	'000	3,936	3,228	2,404
774.50-59, 64, 66	Women's, maids' and girls' (incl. nightdresses) . . . . .	"	8,172	7,668	n.y.a.
	Records (gramophone)(e)—				
647.93	Single play . . . . .	"	9,927	7,783	6,827
647.94	Extended play . . . . .	"	184	67	
647.95	Long play . . . . .	"	22,239	17,208	
657.33, 34, 35	Refrigerators, domestic, electric . . . . .	"	333	277	265
403.02, 18-96, 404	Resins, synthetic and plastics, for all purposes . . . . .	'000 tonnes	819	798	891

(a) Excludes poultry and baby food. (b) Excludes heavy duty coatings. (c) Excludes coated container board. (d) Excludes case plywood. (e) Conventional stereophonic discs.

QUANTITIES OF SELECTED ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS:  
AUSTRALIA—*continued*

Commodity code	Article	Unit of quantity	1981-82	1982-83	1983-84p
123.18	Sauce, tomato (incl. tomato ketchup)	kL	26,234	23,347	27,608
062.04	Semolina	'000 tonnes	34	39	35
773.04-09	Shirts, woven (men's, youths' and boys'), collar attached (a)	'000	5,376	4,548	4,593
654.41	Sink heaters, electric	No.	9,200	7,880	6,900
805.01-13	Soap, for personal toilet use (b)	tonnes	36,141	33,617	33,408
	Soup—				
122.13	Dry powders, granules and cubes	"	5,351	5,835	4,009
122.15	Uncooked soup vegetables	"		n.p.	n.p.
127.15	Starch (incl. cornflour)	"	172,130	161,459	170,215
	Stoves, ovens and ranges, domestic cooking—				
661.02-11	Electric (c)	No.	232,229	160,247	196,739(d)
662.26, 31, 34, 36, 42, 43	Gas (e)	"	105,904	114,754	123,421(f)
662.01, 03	Solid fuel	"	2,771	n.p.	n.p.
	Sugar—				
102.01	Raw	'000 tonnes	3,435	3,534	3,113
405.36	Sulphate of ammonia	tonnes	209,927	196,520	228,151
415.07, 405.25	Superphosphate (g)	'000 tonnes	3,464	2,877	2,668
803.61	Talcum powder	tonnes	4,650	4,461	5,779
	Tallow (including dripping), rendered—				
391.15	Edible	"	68,395	80,714	72,867
391.24	Inedible	"	234,394	258,179	277,821
647.25-28	Television sets (colour)	No.	376,958	271,908	255,211
	Tiles, roofing—				
475.30	Concrete	'000	166,841	128,739	165,039
472.12	Terracotta	"	52,025	40,704	37,915
	Timber—				
	From native logs—				
331.01-07	Hardwood, etc.	'000 m <sup>3</sup>	3,276	2,984	2,817
331.09-19	Softwood	"			
661.22	Toasters, electric (domestic)	No.	711,365	526,002	374,646
094.51	Tomato juice	kL	8,186	5,598	8,348
094.53	Tomato paste and puree	"	17,902	15,846	10,206
386.35-43	Towels (h)	'000 m <sup>2</sup>		7,592(i)	7,964
671.51-59	Toilet cisterns	No.	610,558	n.p.	655,855
683.03-11	Transformers, chokes and ballasts, for distribution of power and light, etc.	"	22,605	20,627	12,458
773.90-97, 774.01-18, 36-49, 61-73, 91-97	Underwear (men's, women's, children's)	'000	86,820	79,296	n.y.a.
692.01	Vacuum cleaners (domestic)	'000	175	n.p.	n.p.
	Wash basins—				
671.37	Earthenware	"	275	212	218
693.02, 04	Washing machines, household, electric	"	n.p.	240	293
	Weatherboards—				
332.12	Australian timber	m <sup>3</sup>	17,921	20,422	25,784
332.14	Imported timber	"	3,392	2,733	5,522
152.14	Wheatmeal for stock feed	'000 tonnes	468	414	271
519.01	Wheelbarrows (metal)	No.	206,949	172,256	155,484
	Wine, beverage—				
172.42	Fortified	kL	54,235	39,223	48,011
172.46	Unfortified	"	253,029	258,141	320,498
341.32-45	Wood pulp (air dried)	'000 tonnes	669	626	593
383.09, 11, 12	Wool, scoured or carbonised	tonnes	81,786	79,661	86,393
383.27-31	Wool tops, pure	"	21,351	22,198	21,238
	Yarn (including mixtures)—				
383.79-87	Cotton	"	22,004	18,884	18,505
383.89-95	Woollen	"	19,919	18,351	17,488
383.97, 99, 384.01, 03	Wool worsted	"			
383.41-77	Synthetic (all types)	"		24,552(j)	26,070
457.04	Zinc, refined (k)	'000 tonnes	301	288	300

(a) Business or formal. (b) Excludes powdered shampoo. (c) Includes wall ovens but excludes cooking tops and portable units. (d) Excludes grill boilers. (e) Upright and elevated (with ovens) including wall ovens, but excluding hotplates, stovettes, etc. (f) Excludes standard town gas wall ovens. (g) Includes double and triple superphosphate and ammonium phosphate expressed in terms of single superphosphate i.e. 22% P<sub>2</sub>O<sub>5</sub> equivalent. (h) Towels or tea towels of cotton or terry fabrics. (i) New series from 1982 83. (j) New series from 1982 83. (k) Primary origin only includes small quantities of zinc dust.

## Enterprise Statistics—Integrated Economic Censuses and Surveys

The Integrated Economic Censuses and Surveys conducted by the Australian Bureau of Statistics have, since 1977-78, included *enterprises* primarily engaged in Mining and Manufacturing annually, with Electricity and Gas Production and Distribution collected in 1977-78 and annually from 1979-80, while other economic sectors are approached on a rotating basis. Statistics in respect of enterprises have been published in *Integrated Economic Censuses and Surveys, Enterprise Statistics: Details by Industry Class, Australia* (Cat. No. 8103.0).

Below is a brief summary of the censuses collection units and methodology and a summary table of enterprise statistics. More detailed explanations on the censuses are shown in the above publication.

The business units, as standardised for purposes of the Integrated Economic Censuses and Surveys are at three levels: the establishment (and associated administrative offices and ancillary units); the enterprise; and the enterprise group.

The central unit from which statistical information was collected is the *enterprise*, defined broadly as the unit comprising all operations in Australia of a single operating legal entity. The term *legal entity* is used to cover a sole proprietor, or partnership, or company, but also includes co-operative societies and some government authorities mainly engaged in the industries included in the censuses and surveys.

The group of legal entities owned or controlled by a single company is recognised as a separate type of unit—the *enterprise group*. The basic unit for which most data were collected and tabulated is the *establishment*, defined in general as a unit comprising all the operations carried on by the one enterprise at a single physical location—such as an individual factory, shop or mine.

In the Integrated Economic Censuses and Surveys, information was collected using a common framework of reporting units (enterprises and establishments as defined above) and data concepts and in accordance with a standard industrial classification (the *Australian Standard Industrial Classification, 1978 Edition*). As a result the statistics for the industries covered by the censuses and surveys are provided with no overlapping or gaps in scope, so that aggregates for economic data such as value added, employment, wages and salaries, fixed capital expenditure and stocks are obtained on a consistent basis for all industries and business units covered by the censuses and surveys. A detailed description of the integration of economic censuses is contained in Chapter 31, Year Book No. 56, 1970.

### ENTERPRISES—SUMMARY OF OPERATIONS BY INDUSTRY, AUSTRALIA

Industry and year	Enterprises operating during year at 30 June (a)	Persons employed at 30 June (b)	Wages and salaries (c)	Turnover (d)	Purchases and selected expenses (e)	Rent leasing and hiring expenses (f)	Stocks (g)		Value added (h)	Fixed capital expenditure less disposals (i)
							Opening	Closing		
	No.	No.	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Mining (excluding services to Mining)										
1981 82 . . . . .	787	77,109	1,815.8	9,703.9	3,613.3	137.1	1,277.1	1,590.4	6,266.8	2,473.2
1982 83(j) . . . . .	813	81,652	2,123.0	12,059.6	4,299.3	180.7	1,708.9	2,031.6	7,902.3	3,576.6
Manufacturing										
1981 82 . . . . .	23,801	1,137,119	17,044.3	81,705.7	48,410.4	1,167.9	13,152.4	14,130.0	33,104.9	4,245.4
1982 83(j) . . . . .	22,943	998,149	17,168.2	79,572.0	46,235.0	1,354.8	13,517.4	13,697.7	32,162.5	3,838.0
Electricity and Gas										
1981 82 . . . . .	98	94,037	1,691.3	7,359.8	3,381.9	36.1	435.9	581.5	4,087.5	2,566.2
1982 83(j) . . . . .	100	95,444	1,965.3	9,198.0	4,366.6	121.7	590.8	762.0	4,880.9	3,538.8

(a) The number of enterprises in operation for all or any part of the year which were in the scope of the censuses and surveys. (b) Working proprietors and employees, including part-time and casual employees as at 30 June. (c) Wages and salaries paid during the year to employees of the enterprise. Drawings of working proprietors are excluded. (d) Sales of goods, commission revenue, repair and service revenue, rent, leasing and hiring revenue, government bounties and subsidies and all other operating revenue except interest, royalties and dividends. (e) Purchases by the enterprise of goods for manufacture or resale, containers, stores and supplies (except office supplies) and charges for fuels, electricity and water, freight and cartage, vehicle running expenses, sales commission expenses, repair and maintenance expenses, and commission and sub-contract expenses. (f) Amount paid for rent and leasing premises, vehicles and equipment. (g) Stocks of materials, fuels, etc. work in progress and finished goods owned by the enterprise. (h) This is derived as turnover plus increase (less decrease) in stocks, less purchases and selected expenses, less rent, leasing and hiring expenses. (i) Outlay on new assets (including progress payments) and land and secondhand fixed tangible assets less disposals. (j) Preliminary estimates and may be subject to revision.

## Foreign Ownership and Control in Manufacturing Industry

Summary information on foreign ownership and control in the manufacturing industry is shown in Chapter 24.

## INTERNAL TRADE

## Wholesale Trade

A sample survey of wholesale establishments was conducted in respect of the year ended 30 June 1982. A table showing the summary of operations of establishments is shown below.

## WHOLESALE ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY GROUP AUSTRALIA, 1981-82

ASIC Code	Industry group Description	Establishments operating during the year (No.)	Persons employed at 30 June (a) ('000)	Wages and salaries (b) (\$m)	Turnover (\$m)	Stocks		Purchases, transfers in and selected expenses (\$m)	Value added (\$m)
						Opening (\$m)	Closing (\$m)		
471	General wholesalers . . . . .	326	5.0	70.0	1,242.3	123.9	126.1	1,043.9	200.6
472	Builders hardware dealers . . . . .	6,928	55.0	696.6	6,607.5	913.7	1,025.0	5,196.4	1,522.3
473	Machinery and equipment wholesalers . . . . .	11,147	114.0	1,639.0	15,888.1	2,908.2	3,515.8	12,371.7	4,124.0
474	Minerals, metals and chemicals wholesalers . . . . .	3,463	39.1	640.8	18,051.5	2,277.8	2,387.0	14,827.9	3,332.8
475	Farm properties and produce dealers, n.e.c. . . . .	3,616	23.0	300.3	9,961.7	1,548.7	1,466.8	8,397.2	1,482.5
476	Food, drink and tobacco wholesalers . . . . .	5,358	51.0	659.1	16,513.8	925.9	1,012.7	14,522.9	2,077.7
477	Textile and clothing wholesalers . . . . .	2,371	16.4	217.5	3,178.4	420.0	457.0	2,502.4	713.0
478	Household goods wholesalers . . . . .	1,718	17.6	245.3	3,411.8	496.1	618.9	2,760.6	774.0
479	Other specialist wholesalers . . . . .	4,392	39.9	527.0	5,922.9	882.3	964.5	4,525.4	1,479.8
	<b>Total</b> . . . . .	<b>39,319</b>	<b>361.0</b>	<b>4,995.6</b>	<b>80,778.0</b>	<b>10,496.7</b>	<b>11,574.0</b>	<b>66,148.5</b>	<b>15,706.7</b>

(a) Includes working proprietors. (b) Excludes drawings by working proprietors.

## Retail Trade

## Retail census

The definition of retail trade, for the purpose of the most recent retail census which was taken for the year ended 30 June 1980, is the resale of new and used goods to final consumers for personal and household consumption. A table showing the summary of operations of establishments covered in the census is given below. Results from the next retail census, to be conducted in respect of 1985-86, are expected to become available, in progressively more detail, from mid-1987.

## RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS (a): SUMMARY OF OPERATIONS, BY INDUSTRY GROUP OR CLASS (b), 1979-80

ASIC Code	Industry group or class Description	Establishments at 30 June (No.)	Persons employed at 30 June (No.) (c)	Wages and salaries (d) (\$m)	Retail sales (\$m)	Turnover (\$m)	Stocks		Purchases, transfers in and selected expenses (\$m)	Value added (\$m)
							Opening (\$m)	Closing (\$m)		
<b>RETAIL ESTABLISHMENTS</b>										
481	Department and general stores . . . . .	857	99,569	717.4	4,010.1	4,253.8	602.7	692.4	3,206.9	1,136.6
484	Clothing, fabrics and furniture stores . . . . .	17,908	81,797	519.1	4,057.5	4,143.4	740.4	851.3	3,140.5	1,113.7
485	Household appliance and hardware stores (e) . . . . .	8,196	43,542	319.7	2,575.9	2,965.6	448.2	517.8	2,252.9	782.3
486	Motor vehicle dealers, petrol and tyre retailers (f) . . . . .	26,516	175,995	1,319.2	12,467.6	18,203.2	1,625.7	1,752.8	15,130.8	3,199.6
488	Food stores . . . . .	39,416	260,266	1,131.3	12,577.3	12,747.0	635.0	751.5	10,517.0	2,346.5
489	Other retailers . . . . .	17,607	76,209	406.9	3,251.5	3,385.4	469.1	549.9	2,489.4	976.7
	<b>Total</b> . . . . .	<b>110,500</b>	<b>737,378</b>	<b>4,413.6</b>	<b>38,940.0</b>	<b>45,698.4</b>	<b>4,521.0</b>	<b>5,115.6</b>	<b>36,737.6</b>	<b>9,555.4</b>



**RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS (a): SUMMARY OF OPERATIONS, BY INDUSTRY GROUP OR CLASS (b), 1979-80—continued**

ASIC Code	Industry group or class Description	Establishments at 30 June (No.)	Persons employed at 30 June (c) (No.)	Wages and salaries (d) (\$m)	Retail sales (\$m)	Turnover (\$m)	Stocks		Purchases transfers in and selected expenses (\$m)	Value added (\$m)
							Opening (\$m)	Closing (\$m)		
<b>SELECTED SERVICE ESTABLISHMENTS</b>										
9133	Motion picture theatres	577	6,777	44.9	31.8	177.9	1.3	1.4	76.0	102.0
923	Restaurants, hotels and accommodation	17,702	183,310	1,021.6	2,618.3	4,670.2	135.5	160.5	2,617.0	2,078.2
9241,2,3	Licensed clubs (g)	3,243	52,297	423.1	697.4	1,515.2	48.2	50.1	577.6	939.5
934	Laundries and dry cleaners	1,365	12,106	91.3	1.5	223.5	6.8	8.0	66.7	158.0
935	Hairdressers, beauty salons	2,265	12,282	78.2	12.2	173.3	4.8	5.7	50.7	123.4

(a) Excludes all bread and milk vendors and single establishment enterprises with turnover of less than \$50,000 (except for ASIC classes 9232 and 9233 in ASIC group 923. For ASIC classes 9232 and 9233 all establishments are included irrespective of turnover size). (b) A class total or a total for a combination of classes has been shown where the scope of the census did not include all the ASIC classes in an ASIC group. (c) Includes working proprietors. (d) Excludes drawings by working proprietors. (e) Includes household appliance and domestic hardware stores, watchmakers and jewellers, music stores and electric appliance repairers but excludes establishments predominantly engaged in selling building materials, paint, tools of trade, etc. (f) Establishments predominantly engaged in wholesaling new motor vehicles are included in this group. (g) Includes licensed bowling clubs, licensed golf clubs and licensed clubs, n.e.c.

### Retail surveys

In intercensal periods, monthly estimates of the value of retail sales of goods (excluding motor vehicles parts, petrol, etc.) by industry, and quarterly estimates by commodity groups, are obtained by means of sample survey for each State and the Australian Capital Territory. Tables showing estimates derived from these surveys are given below.

**VALUE OF RETAIL SALES OF GOODS (EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.) AT CURRENT PRICES: INDUSTRIES (a)**

(\$ million)

ASIC Code	Description	1982-83	1983-84	1984-85
4881	Grocers, confectioners, tobacconists	12,536.9	13,840.5	14,852.7
4882	Butchers	1,551.9	1,517.8	1,550.5
4815	General stores	455.9	475.0	470.9
4883,5,6	Other food stores	2,565.2	2,716.0	2,910.1
4884, 9232; 9241,2,3	Hotels, liquor stores, licensed clubs	4,868.8	5,159.6	5,487.6
4843,4,7	Clothiers	3,718.9	4,050.1	4,363.0
4814	Department stores	4,462.3	4,767.6	5,438.8
4845	Footwear stores	664.5	751.7	806.2
4853,4	Hardware stores	1,049.7	1,174.1	1,188.7
4855,6	Electrical goods stores	2,483.1	2,698.4	2,705.2
4849	Furniture stores	1,117.0	1,113.3	1,215.2
4848	Floor coverings stores	424.7	449.0	522.4
4891	Chemists	1,600.7	1,779.4	1,854.4
4894	Newsagents	1,389.3	1,545.0	1,728.1
4892,3,5,6,7; 9231,9251,2	Other	1,691.8	1,799.6	1,960.3
	<b>Total (b)</b>	<b>40,581.3</b>	<b>43,836.7</b>	<b>47,054.1</b>

(a) Excludes ASIC groups 486 (Motor vehicle dealers; petrol and tyre retailers) and 934 (Laundries and dry-cleaners) and ASIC classes 4846 (Shoe repairers), 4857 (Electrical appliance repairers), 9133 (Motion picture theatres), and 9233 (Accommodation) which were included in the census of Retail Establishments and Selected Services Establishments for 1979-80. Excludes Northern Territory. (b) A small difference between this figure and that for the total value of retail sales shown in the table below occurs due to some businesses having access to more up-to-date records when supplying the data for commodities.

VALUE OF RETAIL SALES OF GOODS (EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.)  
AT CURRENT AND CONSTANT PRICES: COMMODITY GROUPS (a)  
(S million)

Commodity group	Current prices			Average 1979-80 Prices		
	1982-83	1983-84	1984-85	1982-83	1983-84	1984-85
Groceries (b)	8,871.1	9,851.6	10,554.0	6,534.9	6,857.9	7,004.2
Fresh meat	2,302.3	2,369.9	2,385.9	2,091.6	2,007.2	1,922.0
Other food (c)	4,054.6	4,273.5	4,717.3	2,927.1	2,777.7	2,948.7
Beer, wine and spirits	5,199.1	5,499.7	5,883.0	3,936.7	3,832.2	3,804.8
Clothing and drapery	5,670.7	6,019.5	6,416.4	4,677.4	4,665.3	4,706.9
Footwear	914.7	1,025.2	1,121.8	723.5	764.0	784.0
Hardware, china and glassware (d)	1,779.9	2,011.7	2,144.1	1,361.8	1,409.6	1,437.6
Electrical goods (e)	3,008.3	3,296.5	3,452.5	2,741.9	2,987.5	3,214.7
Furniture	1,340.7	1,386.2	1,529.4	982.1	945.7	988.6
Floorcoverings	539.5	552.4	608.9	433.2	418.2	439.0
Cosmetics	990.6	1,057.9	1,177.4	694.4	666.6	701.6
Mediciner etc.	949.3	1,061.9	1,107.2	719.9	775.6	772.3
Newspapers, books and stationery	1,600.7	1,796.4	2,037.7	1,052.2	1,113.6	1,182.1
Other goods (f)	3,317.5	3,593.8	3,892.4	2,628.0	2,588.0	2,690.0
<b>Total (excluding motor vehicles, etc.)</b>	<b>40,539.1</b>	<b>43,796.1</b>	<b>47,028.0</b>	<b>31,504.7</b>	<b>31,809.1</b>	<b>32,596.5</b>

(a) Excludes Northern Territory. (b) Includes confectionery, milk (except home deliveries by vendors) and frozen foods. (c) Includes fresh fruit and vegetables, bread (except home deliveries by vendors), cakes and pastries (except frozen), seafoods (fresh and cooked), hamburgers, cooked chicken, sandwiches, pizzas (except frozen), Chinese food, ice cream and soft drink. (d) Excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc. (e) Includes radios, television and accessories, musical instruments, domestic refrigerators, etc. (f) Includes tobacco, cigarettes, etc., sporting goods, etc., but excludes grain and produce and business machines.

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## CHAPTER 18

### ENERGY

#### Introduction

Australia is well-endowed with energy resources and is presently one of only five OECD countries that are net energy exporters. It presently supplies about two-thirds of its oil requirements from domestic sources and should be able to maintain this relatively favourable situation for some years at least.

Estimates of Australia's demonstrated economically recoverable resources of energy as at December 1984 are:

Brown coal . . . . .	41.9 gigatonnes
Black coal. . . . .	34 gigatonnes
Uranium . . . . .	463 kilotonnes U
Natural gas . . . . .	689 teralitres
Crude oil and natural gas liquids . .	407 ggalitres

Additionally, there are huge inferred resources of black coal amounting to about ten times the demonstrated figure quoted above but presently uneconomic, and resources of oil shale equivalent to about ten times the level of crude oil and condensate resources.

In recognition of the importance of energy resources to Australia's national wealth, policies have been developed to respond to the changing pattern of world energy supplies, to try to minimise uncertainty for the future and to develop other energy sources which can substitute for oil in a wide range of uses, in both domestic and export markets. The basic aims of these policies are:

- to attempt to ensure that an adequate supply of energy is available at all times;
- to facilitate the efficient use of energy in Australia and the efficient development of Australia's energy resources in response to the needs of domestic and overseas energy markets; and
- to ensure the benefits of energy resource development are shared equitably throughout the Australian community.
- in respect of uranium policy:
  - the Government will not permit the development of any new mines with the exception of Roxby Downs, if commercially feasible;
  - Australia's role in the nuclear fuel cycle and all future exports of uranium will be subject to the findings of an inquiry by the Australian Science and Technology Council (ASTEC);
  - the Government will not facilitate or be otherwise involved with uranium enrichment.

In establishing an appropriate framework within which Australia's energy industries can develop, the Government attaches key importance to the pricing and fiscal environment surrounding production, consumption and trade of Australia's energy resources. Realistic pricing of all energy resources is of fundamental importance in developing this framework. The policy of import parity pricing of indigenous crude oil has been, and is important in meeting the Government's policy objectives in the energy field generally and in the field of liquid fuels in particular. This is supplemented however by measures such as support for energy research and development. In this respect a total of \$128 million has been committed to energy research and development through the National Energy Research, Development and Demonstration Program since its inception in 1978. The primary focus of the Program has been the co-ordination and support of research and development activity in Australia to achieve a full understanding of the extent and quality of Australia's energy resource base, and the development of appropriate technologies to enable these resources to be used to their fullest extent for the benefit of the Australian people.

The Government has indicated that a priority matter for its attention is reform of the existing arrangements for the taxation of energy and other extractive industries. It has expressed a preference for the replacement of the present complex system of Commonwealth

and State taxes, royalties, licence fees and other charges currently applicable to many extractive industries with more equitable and efficient profits-related taxes.

In a joint statement dated 27 June 1984 the Treasurer and the Minister for Resources and Energy announced details of a resource rent tax to apply from 1 July 1984 to offshore petroleum projects which have not yet reached the development stage (known as "green-fields" petroleum projects). The tax will be payable on those projects earning, before company tax, a minimum rate of return on project outlays equal to the long term bond rate plus 15 percentage points. Profit in excess of this threshold rate will be taxed at a rate of 40 per cent, additional to company tax.

The resource rent tax is intended to replace all existing excise and royalties on greenfields petroleum projects. It will be levied prior to company tax and be deductible for company tax. Deductions from resource rent tax are available for current and capital expenditure excluding payments related to debt and equity capital and for related exploration expenditure.

Enabling legislation for the resource rent tax is expected to be introduced into Parliament during the 1986 Autumn Session.

## **Advice and co-ordination**

### **Institutional Arrangements**

The Commonwealth Minister for Resources and Energy has portfolio responsibility for national energy policy matters, including the commercial development of hydrocarbon fuels and minerals.

The Department of Resources and Energy provides advice to the Minister on energy policy and provides support for a number of advisory bodies including the National Energy Research Development and Demonstration Council (NERDDC), the Australian Minerals and Energy Council (AMEC), the National Oil Supplies Advisory Committee (NOSAC), the National Petroleum Advisory Committee (NPAC), the National Fuels Emergency Consultative Committee (NFECC), and the Australian Coal Consultative Council (ACCC).

It is also responsible for implementation of action required from Australia's membership of the International Energy Agency (IEA) and for the national system of accounting for a control of nuclear materials under Australia's Agreement with the International Atomic Energy Agency (IAEA).

### **International Energy Agency**

The International Energy Agency (IEA) was established in Paris in November 1974 as an autonomous institution within the framework of the Organisation for Economic Co-operation and Development. Australia joined the IEA in May 1979.

The Agency carries out the International Energy Program and the Long Term Co-operation Program. These programs aim to prepare member countries against risk of oil supply disruptions and to share remaining supplies in the event of a severe oil shortfall, to develop alternative energy sources and the more efficient use of energy including through co-operative research and development programs, and to promote co-operative relations with other oil-producing and oil consuming countries.

The main decision-making body of the IEA is the Governing Board. The Board meets as required at Ministerial level and several times a year at senior official level. The IEA has standing groups on Long Term Co-operation, the Oil Market, Emergency Questions, a Committee on Research and Development and an ad hoc group on International Energy Relations.

## **Research and Development**

### **NERDDC**

The National Energy Research, Development and Demonstration (NERD&D) Program has been established to stimulate the level of energy research, development and demonstration in Australia. Grants under the NERD&D Program are approved by the Minister for Resources and Energy who is advised by the National Energy Research, Development and Demonstration Council (NERDDC).

The Council consists of twelve members drawn from government, laboratories, private industry and tertiary institutions. It is supported by seven Technical Standing Committees covering all major areas of energy technology.

Government, industry and university research bodies are eligible to apply for grants under the NERD&D Program which is administered by the Department of Resources and Energy. From the start of the Program in 1978, \$128 million had been committed by June 1985.

Further Commonwealth support for energy research, development and demonstration is provided through budget appropriations to Commonwealth agencies such as CSIRO, BMR and the Australian Atomic Energy Commission (AAEC), the Australian Industrial Research and Development Incentives Scheme, and Commonwealth funding of all Australian universities.

#### **Commonwealth Scientific and Industrial Research Organization (CSIRO)**

Energy research within the Institute of Energy and Earth Resources is carried out with the objectives of improving methods of locating, evaluating, defining and characterising Australia's energy resources and of planning their development and effective use, consistent with the minimisation of environmental stresses. Divisions of the Institute engaged in energy research are the Division of Geomechanics at Syndal (Vic.); the Division of Energy Chemistry at Lucas Heights (N.S.W.); the Division of Energy Technology at Highett (Vic.); the Division of Fossil Fuels at North Ryde (N.S.W.); the Division of Mineral Chemistry at Port Melbourne (Vic.), and the Division of Mineral Engineering at Clayton (Vic.).

Research on certain renewable sources of energy is carried out in the Institute of Biological Resources, Division of Water and Land Resources and the Centre for Irrigation Research.

#### **AMEC**

The Australian Minerals and Energy Council (AMEC) was established on 9 April 1976 by agreement between State and Federal mines and energy Ministers and replaced the former Australian Minerals Council. AMEC is principally a body for consultation on minerals and energy matters and provides a forum for Ministers to discuss policy issues of mutual concern and co-ordinate policy action. An AMEC Advisory Committee which is composed of the Departmental heads or their nominees provides for officer level consultation and information exchange. AMEC establishes committees, sub-committees etc, to undertake specific tasks and report back through its Advisory Committee as the need arises. At present, the following are in place:

- Co-ordinating Committee on Energy Conservation
- Standing Committee on Offshore Petroleum Legislation
- Sub-committee on the Development of Alternative Commonwealth and State Liquid Fuels Emergency Legislation

#### **ACCC**

The Australian Coal Consultative Council (ACCC) was established following a Coal Industry Conference in Canberra on 30 March 1983. Its terms of reference are to review and report from time to time on the economic and structural problems of the industry. The Council is a tripartite body, chaired by the Minister for Resources and Energy. Its membership comprises the New South Wales and Queensland Ministers responsible for the industry, coal mine proprietors, mining unions and the ACTU. The Australian Mining Industry Council has 'observer' status. The ACCC has met six times, most recently on 20 September 1985.

A National Research Group was set up at the November 1983 meeting which has undertaken seven Working Party reports examining particular problems of the industry. Five of these reports have been completed and considered by the ACCC. An Advisory Committee whose membership reflects that of the ACCC, meets more frequently (approximately monthly) and reports to the ACCC and through it to the relevant Federal and State Ministers.

The ACCC has been effective in developing a greater level of understanding of the industry's situation, particularly on industrial relations issues. This has led to the development of a labour adjustment package to meet the problems of the industry—particularly in N.S.W.

#### **NOSAC**

The National Oil Supplies Advisory Committee (NOSAC) was formed in 1983 by the amalgamation of separate Commonwealth/industry and Commonwealth/State bodies set up during the period of tight oil supply in 1979. Representatives of the Commonwealth Government, State Government energy authorities and major domestic oil producers and refiners meet in NOSAC about three times a year to review the situation and outlook for domestic and international oil supplies. Matters discussed include oil production, new oil and gas developments, imports, exports, stock levels, regional shortages, industrial relations, shipping, technical matters and government policies affecting the oil industry.

**NPAC**

Membership of the National Petroleum Advisory Committee (NPAC) is drawn from agricultural, general aviation, fishing, manufacturing, mining, shipping and transport industries, oil industry, trade union movement and motorists' organisations as well as Commonwealth, State and Territory Governments. The Department of Resources and Energy provides the Secretariat for NPAC. In accordance with the NPAC recommendations the Commonwealth Government has enacted the *Liquid Fuel Emergency Act 1984* and established with the States and the Northern Territory the National Fuels Emergency Consultative Committee.

**NFECC**

The National Fuels Emergency Consultative Committee (NFECC) chaired by the Commonwealth and comprising officials of the Commonwealth, States and the Northern Territory, was established in late 1983 to consult and advise Governments on matters relevant to the preparation for, and detailed management of, a national liquid fuels crisis; and to act as the prime channel of consultation between Governments in the event of such a crisis. NFECC meets three or four times a year in a programme of co-ordinated arrangements for managing a national fuel crisis.

**Resources****Black coal**

Black coal is currently second to petroleum products as the largest source of primary energy in Australia. By world standards, in relation to present population and consumption, Australia is fortunate in the availability of easily worked deposits of coal. The country's main black coal fields are located in New South Wales and Queensland, not far from the coast and from the main centres of population.

Australia's inferred resources of black coal are very large, amounting to over 500,000 megatonnes (Mt). At 30 June 1985, Australia's demonstrated economic resources of black coal were estimated to total 54,105 Mt of which 33,998 were considered recoverable. These recoverable resources are located largely in the Sydney Basin in New South Wales and the Bowen Basin in Queensland. There are other coal-bearing basins in New South Wales and Queensland, and small deposits are being worked in Western Australia, South Australia and Tasmania. Australian saleable black coal production in 1984-85 was 118 Mt.

For further details relating to the production of black coal in Australia see Chapter 16, Mineral Industry. Details about the nature and age of black coal are given in Year Book No. 64, pages 460 and 461.

**Brown coal**

Australia's measured and indicated resources of brown coal are estimated at 43,300 Mt, located principally in Victoria's Latrobe Valley (39,700 Mt). Small deposits exist in other areas of south Gippsland, in south-eastern Victoria at Gelliondale and in the south-central region at Anglesea, Bacchus Marsh and Altona. Deposits are also known at many places along the southern margin of the continent, as far north as central Queensland, and large deposits are being tested in the Kingston area of South Australia, the Esperance area of Western Australia and at Rosevale in the north-east of Tasmania.

Because brown coal has a relatively low specific-energy value and high water content, its utilisation depends on large-scale, low-cost mining and negligible transportation costs in its raw state.

In Victoria the brown coal industry has reached a high degree of sophistication in mining, on-site development for power generation, briquetting and char manufacture. Production of brown coal in Victoria during 1984-85 was 32 Mt. The brown coal deposits of the Latrobe Valley have been developed by the State Electricity Commission of Victoria (SECV) for the generation of electricity. By the end of 1984-85, about 880 Mt of raw brown coal had been mined.

**Energy research and development statistics**

Estimates of the expenditure on energy R & D carried out in Australia during 1982-83, and classified by energy objective, are presented in the table below.

The estimate of manpower resources devoted to energy R & D in Australia during 1982-83 was 3,222 man years. Of this amount, business organisations accounted for 1,079 man years, general government organisations for 1,155 man years and higher education organisations for 988 man years.

More detailed statistics are contained in the ABS publication *Research and Experimental Development; Energy Production, Utilisation and Conservation, All Sectors, Australia, 1982-83* (8110.0)

ENERGY RESEARCH AND EXPERIMENTAL DEVELOPMENT(a), AUSTRALIA, 1982-83  
DETAILS OF R & D EXPENDITURE BY ENERGY OBJECTIVE(b)

(\$'000)

Energy objectives(b)		Sector of performance(d)				Source of funds(f)	
		Total expenditure(c)	Business enterprises(e)	General government and higher education	Industry		
Energy codes	Description						
Production and utilisation of energy—							
513	Oil and gas—mining extraction techniques . . . . .	818	n.p.	n.p.	70	748	
111	—refining, transport and storage . . . . .	3,586	2,620	967	2,633	953	
112,523,533	—other . . . . .	10,110	2,230	7,880	2,897	7,213	
113,114,514,524,534	Oil shale and tar sands . . . . .	7,991	n.p.	n.p.	425	7,566	
512	Coal—mining extraction techniques . . . . .	9,520	n.p.	n.p.	5,990	3,531	
121	—preparation and transport . . . . .	9,159	5,136	4,024	3,930	5,230	
122	—combustion . . . . .	5,113	2,808	2,305	2,873	2,240	
211	—conversion . . . . .	13,550	2,503	11,046	1,560	11,990	
123,522,532	—other . . . . .	8,114	3,449	4,665	2,867	5,247	
131	Solar—heating and cooling . . . . .	5,913	2,778	3,135	2,613	3,300	
132	—photo electric . . . . .	4,065	682	3,383	329	3,736	
133	—thermal electric . . . . .	1,377	431	946	469	907	
141	Nuclear—non-breeder—light water reactor . . . . .	1,850	—	1,850	1	1,849	
142	—other converter reactor . . . . .	—	—	—	—	—	
143,511,521,531	—fuel cycle . . . . .	13,980	n.p.	n.p.	736	13,243	
144	—supporting technologies . . . . .	387	n.p.	n.p.	n.p.	n.p.	
145	—breeder . . . . .	—	—	—	—	—	
146	—fusion . . . . .	7,714	n.p.	n.p.	n.p.	n.p.	
151	Wind . . . . .	862	283	578	301	561	
152	Ocean . . . . .	56	—	56	—	55	
153	Geothermal . . . . .	60	—	60	—	60	
221	Biomass . . . . .	6,929	2,644	4,285	2,497	4,432	
154	Other sources and new vectors . . . . .	2,615	2,100	515	1,871	745	
Conservation of energy—							
311	Industry . . . . .	7,708	5,605	2,103	5,283	2,425	
312	Residential and commercial . . . . .	6,062	3,349	2,713	3,133	2,929	
313	Transportation . . . . .	13,939	8,356	5,582	6,837	7,102	
314	Other . . . . .	1,645	1,298	348	1,174	471	
Other energy R & D (including supporting technologies)—							
411	Electric power conversion . . . . .	4,098	2,533	1,565	2,201	1,897	
412	Electricity, transmission and distribution . . . . .	3,031	497	2,534	535	2,496	
413	Energy storage, n.e.c. . . . .	1,215	640	575	608	606	
414	Energy system analysis . . . . .	2,001	78	1,923	55	1,946	
415	Other . . . . .	3,316	245	3,071	221	3,096	
<b>Total all energy objectives . . . . .</b>		<b>156,785</b>	<b>59,046</b>	<b>97,739</b>	<b>54,109</b>	<b>102,676</b>	

(a) Refers to R & D activity predominantly directed towards producing, storing, transmitting, utilising and conserving energy. (b) The energy objective categories represent ultimate national needs rather than the immediate objective of the researcher or the organisation performing the energy R & D. (c) Includes expenditure associated with overhead staff providing indirect services to energy R & D. (d) The sector classification used is adapted from the guidelines specified by the OECD for use in the conduct of R & D studies. (e) Excludes enterprises in ASIC Division A—i.e. enterprises mainly engaged in agriculture, forestry, fishing and hunting. (f) In accordance with IEA practice, source of funds are classified as either Industry or Government.

### Petroleum

For a definition of petroleum, together with a brief description of recovery techniques and the history of the search for petroleum in Australia, see Year Book No. 64, pages 461 and 462.

Good prospects of further discoveries of petroleum are considered to exist in Australia, particularly in sedimentary basins off the north-west coast. Consistent with the existing pattern of discoveries, undiscovered oil is likely to be of the lighter type and more gas fields than oil fields will be found. Assessments by the Bureau of Mineral Resources, Geology and Geophysics indicate that there is a 50 per cent chance of finding at least another 286 gigalitres (GL) (1,800 million barrels) of crude oil in Australia. This compares with demonstrated economically recoverable resources of 240 GL (1,510 million barrels) and demonstrated sub-economically recoverable resources of 49 GL (308 million barrels) as at 31 December 1984.

## PETROLEUM RESOURCES(a) AS AT 31 DECEMBER 1983

(Source: Department of Resources and Energy)

Basin	Crude oil GL	Gas condensate GL	LPG GL	Sales gas 10 <sup>6</sup> m <sup>3</sup>
<i>Demonstrated economic(b)</i>				
Gippsland (Vic.) . . . . .	205	20	46	171
Carnarvon/Canning (W.A.) . . . . .	13	51	27	411
Eromanga (S.A./Qld) . . . . .	11	—	—	3
Cooper (S.A./Qld) . . . . .	4	7	13	82
Amadeus (N.T.) . . . . .	6	3	—	16
Perth (W.A.) . . . . .	1	—	—	4
Bowen/Surat (Qld) . . . . .	—	—	—	2
Otway (Vic.) . . . . .	—	—	—	—
<b>Total</b> . . . . .	<b>240</b>	<b>81</b>	<b>86</b>	<b>689</b>
<i>Demonstrated sub-economic(c)</i>				
Gippsland/Bass (Vic./Tas.) . . . . .	32	7	5	32
Bonaparte (W.A./N.T.) . . . . .	9	7	3	229
Carnarvon (W.A.) . . . . .	6	5	1	443
Eromanga (S.A./Qld) . . . . .	2	—	—	1
Browse (W.A.) . . . . .	—	8	—	97
Cooper (S.A./Qld) . . . . .	—	1	2	24
Bowen/Surat/Adavale (Qld) . . . . .	—	—	—	6
<b>Total</b> . . . . .	<b>49</b>	<b>28</b>	<b>11</b>	<b>832</b>

(a) Based on the McKelvey classification which sub-divides resources in terms of the economic feasibility of extraction and their certainty of occurrence. (b) Demonstrated economic resources are resources judged to be economically extractable and for which the quantity and quality are computed from specific measurements and extrapolation on geological evidence. (c) Demonstrated sub-economic resources are similar to demonstrated economic resources in terms of certainty of occurrence but are judged to be sub-economic at present.

## PETROLEUM PRODUCTION IN AUSTRALIA

(Source: Department of Resources and Energy)

Year	Crude oil and Condensate ML	LPG (a) ML	Natural gas GL
1980-81 . . . . .	23,052	2,982	10,435
1981-82 . . . . .	22,378	3,033	11,550
1982-83 . . . . .	22,069	2,909	11,654
1983-84 . . . . .	26,828	3,132	12,098
1984-85 . . . . .	30,919	3,863	12,958

(a) Naturally occurring.

**Crude Oil and Condensate**

Indigenous production of crude oil and condensate reached a new record level in 1984-85, surpassing the previous record set in 1983-84. New wells came on stream in the Cooper/Eromanga, North West Shelf and Amadeus Basins and production from Bass Strait also increased.

Exports of crude oil from Bass Strait increased markedly during the year. Crude oil is now Australia's second largest mineral export earner after coal. During 1984-85 approximately 19 per cent of Bass Strait production of crude oil was exported. Main markets were the USA, Singapore and Japan.

Exports of condensate continued from the Cooper Basin and began from the North West Shelf in March 1985; currently about a third of condensate production is being exported. Self sufficiency in liquid fuels rose during 1984-85 to 95 per cent compared with 77 per cent in 1983-84.

**Liquefied petroleum gas**

Liquefied petroleum gas (LPG) is a valuable co-product of oil and gas production and petroleum refining. The major constituents of LPG are propane, propylene and iso- and normal-butane, which are gaseous at normal temperatures and pressures and are easily liquefied at moderate pressures or reduced temperature. Operations involving LPG are



expensive relative to other liquid fuels because LPG has to be refrigerated or pressurised when transported or stored. LPG is an alternative transport fuel for high mileage vehicles in capital cities as well as a petrochemical feedstock and a traditional fuel.

Identified economically recoverable resources of LPG at December 1984 of 86,000 megalitres (ML) are concentrated in Bass Strait, the North West Shelf and the Cooper Basin.

Production of naturally occurring LPG in Australia in 1984-85 was 3,842 ML, (3,082 ML Bass Strait and 739 Cooper Basin), virtually all being extracted from crude oil and natural gas from the Bass Strait fields. About 74 per cent of Australia's LPG production is exported (2,620 ML in 1984-85)—mainly to Japan. Domestic consumption of 1,261 ML in 1984-85 was met by 736 ML of product obtained from refineries with supply shortfalls being met by naturally occurring Bass Strait product.

### **North West Shelf Project**

On 2 August 1985 the Joint Venture Participants (JVP) announced the successful completion of legal formalities for the export of Liquefied Natural Gas (LNG) to Japan from the North West Shelf project. The project is the largest single resource development project ever undertaken in Australia. Exports are to commence in October 1989 and will build up to six million tonnes a year from 1995, under take or pay provisions, until 2008. It is expected that some \$50 billion, in dollars of the day terms, in export revenue will be generated. North West Shelf gas will be sold to five electricity and three gas utilities which supply a combined market of some 90 million people.

The project is estimated to cost a total of \$12 billion. Of this, \$2,100 million has been spent by the JVP for the supply of natural gas to the domestic markets of south west Western Australia, comprising the North Rankin 'A' platform, a 134 Km submarine pipeline, the onshore domestic gas plant and associated site engineering services. The State Energy Commission of Western Australia (SECWA) also constructed a 1,500 Km pipeline to serve the domestic markets.

The second phase, the export of LNG, currently estimated to cost \$9.8 billion, includes an on-shore LNG plant (\$3,500 million), two more off-shore production platforms, further drilling and pipelines, site engineering and the provision of infrastructure and housing in Karratha. Seven 125,000 m<sup>3</sup> LNG tankers (\$2 billion) are in addition to this estimate.

The project operators, Woodside Offshore Petroleum, have already announced the letting of some contracts and it is expected that most major contracts for the LNG plant will be announced by mid 1986, with on-site labour expected to peak at around 4,800 in mid 1987, winding down to 1,750 for the operations phase to the end of the contract.

On 12 March 1985 it was announced that the domestic gas contracts had been successfully renegotiated alleviating a potentially serious revenue shortfall for SECWA. This involved, in part, the waiving by the Commonwealth of its share of domestic gas royalties in favour of the State.

The National Liaison Group (NLG) on the North West Shelf was subsequently established to serve as a forum for the exchange of information with a view to increasing Australian content in contracts and purchase orders for the project. It comprises representatives of the Commonwealth and State Governments, trade unions and industry associations together with the JVP. The Commonwealth Minister for Resources and Energy, is joint chairman with the W.A. Minister for Minerals and Energy. The aim of the NLG is to maximise Australian content consistent with cost, quality and performance criteria. The fundamental principle is that Australian industry should have a full and fair opportunity to compete in tenders for the project.

The North West Shelf project is one of national significance, with the potential for major impact on Australia's international trading position.

### **Pricing of Australian crude oil**

The pricing of Australian crude oil at import parity levels is fundamental to energy policy in Australia. Crude oil is a scarce and valuable resource and the Government considers that it should be competitively priced, to ensure that its usage recognises this value. Import parity pricing is considered essential to encourage:

- conservation of liquid fuels;
- exploration and development;
- substitution by more plentiful gaseous and solid fuels; and
- the economic development of liquid fuel substitutes.

Import parity pricing provides the basis for the long-term security of supply for Australia and the continuous adaptation of the Australian economy to changing world energy prices.

The present pricing and excise arrangements are based on announcements made by the Commonwealth Government on 9 October 1984. Refiners pay and producers receive the appropriate import parity prices (IPP) for all liftings of indigenously produced crude oil.

The import parity prices are currently reviewed every six months (1 January and 1 July) or every two months if movements in the relevant parameters would result in a price change of \$1 a barrel or more, and even more frequently if there are major changes in circumstances. The prices are based on the landed costs of Saudi Arabian light crude oil at the nearest refinery port to the producing area and then adjusted for domestic freight cost and quality differentials. The current import parity prices from 1 September 1985 are \$265.88/kl (\$42.25/barrel) for Bass Strait crude, \$269.39/kl (\$42.81/barrel) for Barrow Island, \$269.18/kl (\$42.77/barrel) for Cooper/Eromanga Basin, \$258.78/kl (\$41.12/barrel) for Jackson, \$252.05/kl (\$40.05/barrel) for Dongara, \$273.11/kl (\$43.40/barrel) for Bodalla SPL/Tintaburra, Bowen/Surat Basin, \$260.02/kl (\$41.32/barrel) for Canning Basin, \$250.73/kl (\$39.84/barrel) for Mt Horner, and \$263.30/kl (\$41.84/barrel) for Mereenie.

For projects which had reached the development stage on 1 July 1984 and new onshore projects, producers pay excise to the Commonwealth and royalty to the State (if onshore) or Commonwealth (if offshore). Excise is paid at a rate based on the annual level of crude oil sales from the producing area and is levied as a percentage of the Bass Strait IPP. Different excise scales are applicable to oil discovered before 18 September 1975 ("old" oil) and oil discovered on or after that date ("new" oil). An intermediate scale will apply to oil produced from "old" oil fields that were not developed as of 23 October 1984. The rates are given the following table.

CRUDE OIL PRODUCTION: EXCISE PERCENTAGES PAID AND PRODUCER RETURNS, AUSTRALIA

Annual production range	Excise rate (Percentage of import parity price)					
	'Old' oil		Intermediate scale		'New' oil	
	Marginal excise rate	Average excise rate	Marginal excise rate	Average excise rate	Marginal excise rate	Average excise rate
Megalitres						
0-50	—	—	—	—	—	—
50-100	5	2.50	—	—	—	—
100-200	15	8.75	—	—	—	—
200-300	20	12.50	—	—	—	—
300-400	40	19.38	15	3.75	—	—
400-500	70	29.50	30	9.00	—	—
500-600	80	37.92	50	15.83	10	1.67
600-700	87	44.93	55	21.43	20	4.27
700-800	87	50.19	55	25.63	30	7.50
Greater than 800	87	n.a.	55	n.a.	35	n.a.

Offshore projects in 'greenfields' areas, that is offshore areas not covered by production licences granted before 1 July 1984 and the permit areas from which they were drawn, will be subject to a resource rent tax. The tax will replace existing excise and royalty arrangements.

#### Crude Oil Allocation Scheme

The crude oil allocation scheme was designed to stimulate the production of Australian crude oil by guaranteeing a market for this production which was then a relatively expensive source of crude oil. The present allocation scheme first came into operation in September 1971. On 17 September 1980 the then Minister for National Development and Energy announced the extension of this scheme, subject to some modifications, until 31 December 1984.

The Scheme provides for the allocation of indigenous crude oil to refiner/marketers based on their market share of most refined petroleum products sold in Australia.

In June 1984, the Government announced that exports of Bass Strait crude oil which are surplus to domestic refiners' requirements would continue to be permitted until December 1984 together with exports of condensate. Government approval would be required for each export cargo.

In late 1984, the Government undertook a major review of the Crude Oil Allocation Scheme. Two discussion papers have been published and an announcement of the partial allocation arrangements to apply from 1 January 1985 was made on 9 October 1984. These

arrangements provide for all production from areas producing less than 50 kbd (thousand barrels per day) and the first 350 kbd of Bass Strait production to be allocated. Bass Strait production above this level is available for local sale or export at negotiated prices.

#### **Pricing of liquefied petroleum gas (LPG)**

The Commonwealth Government sets the price that the producers receive for LPG sold for automotive and traditional domestic, commercial and industrial users. Pricing arrangements which came into force on 28 March 1984 apply until the end of March 1987. Adjustments to the wholesale price are made on 1 October and 1 April each year on the basis of the average monthly export parity price of Bass Strait propane from 1 April 1984 to the month preceding the new price date, but increases are not allowed to exceed rises in the fuel and light component of the consumer price index for the latest six month period available prior to the adjustment date. The designated price on 1 April 1985 was \$253.34 per tonne. These arrangements do not apply to non-traditional commercial, industrial and petrochemical users or exports. In these areas the price is determined by commercial negotiation.

Under the excise arrangements announced in April 1980, producers of naturally occurring LPG from fields in production prior to 17 August 1977 pay excise at a rate equivalent to 60 per cent of the average return to producers on both domestic and export markets in excess of \$147 per tonne. LPG from fields brought into production on or after 17 August 1977 is free from excise. Adjustments to the LPG excise rate are made on 1 April and 1 October each year.

A subsidy paid to households and commercial and industrial users in areas without access to natural gas, terminated on 1 October 1985.

The pricing arrangements will be reviewed early in 1987.

#### **Oil shale**

A description of the nature and location of Australian oil shale deposits is given in Year Book No. 67, page 468.

Major investigations into oil shale development are concentrated on the Condor and Rundle deposits.

A \$US24 million feasibility study on the Condor project finished on 30 June 1984. The exclusive rights of the Japanese participants, Japan Australia Oil Shale Corporation (JAOSCO), to negotiate the future development of the project was terminated in September 1985.

Studies are proceeding on the Rundle project. Participants are Esso Australia, Southern Pacific Petroleum and Central Pacific Minerals.

#### **Uranium**

Australia has about 29 per cent of the Western world's low-cost uranium reserves. Deposits occur in the Northern Territory, Western Australia, South Australia and Queensland.

The major use for uranium is as a fuel in nuclear reactors. It is also used for power generation in atomic energy research programmes.

Uranium was first observed in Australia in 1894 but systematic exploration did not begin until 1944 following requests from the United Kingdom and United States Governments. A number of significant deposits were identified, particularly in the Katherine/Darwin region of the Northern Territory and the Mt Isa/Cloncurry region in Queensland. This initial phase of exploration activity reach a peak in 1954.

In the period 1954-71 about 9,200 tonnes of uranium oxide concentrate was produced from five plants at Rum Jungle, Moline and Rockhole in the Northern Territory, Mary Kathleen in Queensland and Radium Hill in South Australia. Uranium requirements for defence purposes decreased in the early 1960s and uranium demand and prices fell rapidly, whereupon exploration for uranium almost came to a standstill.

A revival in exploration in the late 1960s was encouraged by the announcements in 1967 of a new export policy, designed to encourage exploration for new uranium deposits while conserving known resources for future needs in Australia. The renewed exploration activity which followed was very successful—major discoveries were found in South Australia: Beverley (1969), Honeymoon (1972), Olympic Dam (1975), and in Northern Territory: Ranger (1969), Nabarlek (1970), Koongarra (1970) and Jabiluka (1971). These and other discoveries have led to substantial additions to Australia's reasonably assured uranium resources which now total 474,000 tonnes of uranium recoverable at less than \$US80 per kg U.

The Mary Kathleen mine which had ceased operations in 1963, opened again in 1976. After mining and treating sufficient ore to meet its contractual commitments, the mine was closed in 1982.

The Ranger mine was authorised under Section 41 of the Atomic Energy Act in 1979, and commercial production at a planned rate of 3,000 tonnes yellowcake ( $U_3O_8$ ) per annum commenced in late 1981. Development approval for the Nabarlek deposit was granted in early 1979 and mining commenced later that year. Production at a planned rate of 1,000 tonnes  $U_3O_8$  per annum, commenced in 1981.

Following the election of a new Government in 1983 a complete review of all aspects of Australia's policies as they relate to uranium was instituted. This process was completed in November 1983, at which time the Government announced its policy on uranium.

The policy provides for the continuing operation of the existing Ranger and Nabarlek mines in the Northern Territory and the development of the Olympic Dam copper-uranium-gold deposit in South Australia. No other uranium mines will be permitted to proceed, but existing mines and the Olympic Dam project will be allowed to negotiate new contracts.

All exports of Australian uranium under existing and future contracts will continue to be subject to the most stringent safeguard requirements. In addition, exports of Australian uranium for end use in France will not be permitted until France ceases testing nuclear weapons in the South Pacific Region.

All uranium produced in Australia is exported in the form of yellowcake for use in nuclear reactors for the generation of electricity, and for the production of radioisotopes and radiopharmaceuticals. Australia's two producers have contracts with utilities in Japan, the Federal Republic of Germany, Republic of Korea, Finland, Sweden, Belgium, and the USA.

Contract tonnes for the period 1977-1996 exceed 55,000 tonnes  $U_3O_8$ . Exports for 1984-85 amounted to almost 3,400 tonnes  $U_3O_8$  valued at about \$A300m.

The *Australian Atomic Energy Commission (AAEC)*, was established as a statutory body by the Commonwealth Parliament under the *Atomic Energy Act 1953*.

The AAEC's activities are controlled by a Commission which is responsible to the Minister for Resources and Energy. The *Atomic Energy Act* provides for the Commission to consist of five Commissioners including a Chairman.

Moving in its earliest days towards the planning and construction of a nuclear research establishment at Lucas Heights near Sydney, the Commission arranged for a nucleus of scientists and engineers to obtain training and experience through overseas attachments, mainly in the United Kingdom. By the late 1950s a research and development (R&D) program had been initiated at its research establishment.

The AAEC's current nuclear program includes radioisotope production and applications, environmental science (particularly in relation to uranium mining activities), provision of support for regulatory and international operations and waste management studies. The latter involves the construction of a non-radioactive pilot plant for the manufacture of full-sized blocks of SYNROC (a synthetic rock-like material used to immobilise high level radioactive waste from reactors). The AAEC is also participating in co-operative research programs with both Japan and the UK and Italy to investigate the properties of SYNROC and its abilities to immobilise high level waste.

The programs, structure and functions of the AAEC are currently under review. Particular attention is being given to ensuring that the functions and programs of the AAEC are appropriate to national requirements.

Current expenditure by the AAEC is of the order of \$52 million a year. Staff totals some 1,088 professional, technical, trade, administration and support personnel.

The AAEC participates in the activities of the Australian Institute of Nuclear Science and Engineering. The Institute, which has a corporate membership comprising the Commission and the Australian universities, is concerned with the awarding of studentships, fellowships and research grants, with the organising of conferences and with arranging the use of AAEC facilities by research workers within the universities and colleges of advanced education. The Australian School of Nuclear Technology, located at Lucas Heights, is a joint enterprise of the AAEC and the University of New South Wales. Courses are provided regularly on such subjects as radio-nuclides in medicine, radiation protection and nuclear technology. Participants have been drawn from Australia, New Zealand, Asia, Africa, Papua New Guinea and the Pacific region.

*The Atomic Energy Act* is the principal Commonwealth legislation in the nuclear field. As well as being the legislative basis for the AAEC, the Act provides for Commonwealth powers over uranium and nuclear materials, it was also used as the basis for the authorisation of the Ranger Uranium Mine.

The Government's policy is to introduce a package of new legislation to establish a successor to the AAEC, to repeal repressive and outmoded security provisions of the *Atomic Energy Act* and to give effect to Australia's international nuclear non-proliferation and safeguards obligations.

For further details relating to the production of uranium in Australia see Chapter 16, Mineral Industry.

### **Thorium**

Thorium is a radioactive mineral that is about three times as abundant as uranium, but occurs in fewer geological environments and in lower grade accumulation. Most of the world's resources of thorium occur in monazite, a complex phosphate recovered primarily for its rare-earth content. Primary thorium minerals are resistant to oxidation and form economically important placer deposits as well as hard-rock deposits.

In Australia, monazite is produced from titanium-bearing mineral sands on the east and west coasts. Other thorium occurrences are known, but are uneconomic. Australia currently supplies about 60 per cent of the world's traded monazite.

Exports from Australia of thorium and thorium-containing ores require the approval of the Minister for Trade under the Customs (Prohibited Exports) Regulations.

### **Solar Energy**

Solar radiation is measured continuously on a routine basis by the Bureau of Meteorology at 28 stations throughout Australia. These stations also supply data on air temperatures, dewpoint and wind.

Like wind, and tidal and wave energy, solar energy is inexhaustible and shares with these energy sources a number of properties which make it both difficult and costly to collect, store and transform into useful work. The particular properties are low intensity, geographic, seasonal and daily variations.

The use of solar energy for domestic hot water supply is well established commercially in Australia and the solar hot water systems industry production now has a value of about \$44 million per annum. With a view to industrial application, advanced collectors have been designed which can produce steam. Currently however, there appear to be few applications of solar energy which are economically attractive to industry.

The use of passive solar design principles in housing is increasing as relatively low cost passive designs are developed. In the area of electricity generation, photo-voltaics are already viable in some small-scale specialist applications, for example, in navigation and communications stations. If costs are reduced, solar electricity may be increasingly used in the future, for remote homestead or community power supplies and for pumping of water. Solar cooling is not economic at this stage owing to high capital costs and low efficiencies.

### **Ocean thermal energy**

In Australia, there has been virtually no assessment of the potential of the ocean thermal energy source made. It has been suggested that tropical waters such as those off the Queensland coast would be suitable, but power generated from this area would be of considerable distance from the major power consumers in the south, and therefore unable to compete with coal based electricity.

### **Wind energy**

Using data from Bureau of Meteorology wind stations, CSIRO has undertaken a continental wind assessment of Australia. In addition, a number of site specific wind resource assessments have been carried out by CSIRO and other bodies. Broadly, these studies indicate that while the bulk of the Australian inland has relatively low average windspeeds, some coastal and island localities have favourable wind energy resources, notably on the Western Australian, South Australian and Tasmanian coasts, in Bass Strait and on Lord Howe Island.

At present the use of wind energy in Australia is confined principally to mechanical windmills for water pumping and small wind electricity generators for remote areas.

It is unlikely that wind energy will be able to compete on a widespread and large scale with coal for electricity generation in Australia, but where wind resources are favourable,

wind turbines could find increasing application in remote areas which currently rely on diesel fuel for electricity production.

Two imported machines in the 20-55 kW range are currently being demonstrated on Rottneest Island in Western Australia, and another imported 55 kW machine is operating at Ballarat in Victoria. At the same time, two Australian manufactured wind turbines are also being demonstrated, one 60 kW capacity machine at Fremantle in Western Australia, the second, a 16 kW machine at Wodonga in Victoria.

### **Geothermal energy**

Most of Australia's geothermal resources are of conduction-dominated type. A most extensive and well documented study in Australia of subsurface temperatures has been made in bore-holes in the Great Artesian Basin. In this basin, about 20 per cent of indexed water bores penetrate to depths greater than 1,000 m and since geothermal gradients are generally greater than 30°C/1,000 m, it is reasonable to assume that hot water can be obtained from such aquifers. Of the total number of indexed water bores, only a very small proportion have water temperatures greater than 100°C.

Australia's geothermal resources in other basins are probably comparable with that of the Great Artesian Basin, the extrapolation of flow rates and temperatures to other sedimentary basins suggests it to be geologically reasonable. Economic and technical difficulties indicate that in the foreseeable future the potential use of our geothermal resources will be largely restricted to hot water supply, for space heating and light industrial purposes.

In Australia, it has been estimated by the Bureau of Mineral Resources (BMR) that identified (demonstrated and inferred) geothermal resources are about 1 per cent of Australia's annual primary energy consumption. Undiscovered geothermal resources however may be many orders of magnitude greater than the above estimate.

### **Tidal energy**

Tidal energy is a dispersed energy source derived from regular fluctuations in the combined gravitational forces exerted by the moon and the sun, at any one point on the earth's surface, as the earth rotates. The mean tidal range in the open ocean is about 1 metre, but under suitable hydraulic and topographical conditions, much higher tides than this build up in places around coasts, due to resonance. Because only two commercial tidal plants exist so far in the world, relatively little is known about the possible environmental impact of large-scale utilisation. It is unlikely, however, that tidal installations would be entirely without effect on the ecological life of bays and estuaries within their area of influence due, for instance, to silting and concomitant dredging.

Around Australia there are theoretically very large amounts of tidal energy available, especially on the north-west coast where the tidal range is as great as 11 metres and where the topography is suitable. The tidal potential of this region has been the subject of a series of investigations, including one carried out in 1965 on one of the most promising sites at Secure Bay. It was concluded that a minimum of 12 years design and construction time would be required, although the cost of electricity at the site would be similar to that derived from conventional thermal stations. However, the long distances to potential markets result in a doubling of these electricity generation costs. Subsequent studies by the State Energy Commission of Western Australia have indicated that lead times and construction costs could be reduced but not sufficiently to make tidal energy economically attractive even if a suitable electricity consumer were nearby.

The likelihood of early exploitation of this resource would appear to be less than in other countries, if only because of the long distances involved in transmission to population centres. In Australia, the major consumer regions are located along coastlines where the tidal range is very small.

### **Biomass**

Biomass includes crops, wood, agricultural and forestry residues and animal wastes. Currently only two forms of biomass are used significantly as energy resources in Australia. These are firewood and bagasse, both converted to energy by direct combustion.

Approximately 2 megatonnes of firewood are used annually in Australia, equivalent in energy terms to 82.3 petajoules, or 2.6 per cent of Australia's primary energy demand. Production is expected to remain stable at about this level through the 1980s.

Bagasse is the fibrous residue remaining after extraction of the juice from sugar cane. It is the major fuel used in the sugar industry, providing 68.5 petajoules or 2.2 per cent of Australia's total primary energy demand.

Biomass also has a possible use as a source of liquid fuels for transport, particularly ethanol and methanol. Technologies are commercially available for converting biomass to liquid fuels. The major impediments to its current use are that it is not competitive with conventional fuels and generally vehicle modifications are necessary for satisfactory operation.

In 1979, the CSIRO completed a survey of the potential for the production of these fuels from agricultural and forestry resources in Australia. The resources considered were both new energy crops and forest plantations, as well as the residues from existing crop and forest production. In estimating potential new crop production, it was assumed that all land with suitable climate, soil and terrain for an energy crop would be available for energy farming except land at present under crops or sown pastures. The total biomass resources considered could provide a net liquid fuels output of 460 petajoules, 65 per cent of the energy used as liquid fuel in transport in 1977-78. This is a net figure taking into account the liquid fuel used in production. It does not take into account socio-economic considerations such as more profitable or socially desirable use of the land available for new crops. It must be considered as an upper limit only.

Recent studies have shown that, largely as a result of the cost of production of the feedstocks, liquid fuel from biomass is at major economic disadvantage compared to petroleum-based fuels, and is unlikely to be commercialised on a significant scale in the near future.

### **Electric power**

Responsibility for public electricity supply rests with the State Governments which control electricity production and distribution through public authorities. The Commonwealth Government's major direct role in the electricity supply industry is its responsibility for the Snowy Mountains Scheme. Greater descriptive and historical detail about the various systems is contained in earlier issues of the Year Book.

#### **Hydro-Electric Resources**

With the exception of Tasmania, Australia is generally not well-endowed with hydro-electric resources because of low average rainfall and limited areas of high relief. Major hydro-electric potential is confined to Tasmania and the Great Dividing Range areas of Victoria, New South Wales and Queensland, with some small potential on rivers draining into the Timor Sea in Western Australia and the Northern Territory.

The practical potential of hydro-electric power in Australia has been estimated at 24,000 gigawatt hours (GWh) per year, of which about 60 per cent has currently been developed. In 1983-84, hydro-electric generation was 12,808 GWh.

At 30 June 1984 the installed hydro-electric generating capacity of 6,663 megawatts (MW) represented 21 per cent of total installed capacity.

Future hydro development will be mainly limited to environmentally acceptable sites in Tasmania, and to a lesser extent North Queensland, as most of the low cost resource elsewhere has already been developed. Although hydro-electric power stations will continue to be constructed into the 1990s and probably beyond, hydro's share of total generation will decline as increasing load is met mainly by coal-fired power stations.

#### **Snowy Mountains Hydro-Electric Scheme**

The Snowy Mountains Scheme is a dual purpose complex which supplies water for generation and irrigation. It is located in south-eastern Australia, and on its completion was one of the largest engineering works of its type in the world. It impounds the south-flowing waters of the Snowy River and its tributary the Eucumbene, at high elevations and diverts them inland to the Murray and Murrumbidgee Rivers through two tunnel systems driven through the Snowy Mountains. The Scheme also involves the regulation and utilisation of the headwaters of the Murrumbidgee, Tumut, Tooma and Geehi Rivers. The diverted waters fall some 800 metres and together with regulated flows in the Geehi and Tumut River catchments generate mainly peak load electricity for the States of New South Wales, Victoria and the Australian Capital Territory as they pass through power stations to the irrigation areas inland from the Snowy Mountains.

A special article on the Scheme, written 20 years after the first diversion of water from the Snowy River to the Murray River in April 1966, appears at the end of this chapter.

**Electricity generation and transmission**

The following table shows details of thermal and hydro electricity generated in Australia during recent years.

**ELECTRICITY (a)—THERMAL AND HYDRO**

Year	Million kWh
1978-79 . . . . .	90,857
1979-80 . . . . .	95,910
1980-81 . . . . .	100,782
1981-82 . . . . .	104,975
1982-83 . . . . .	105,933
1983-84 . . . . .	111,696

(a) Figures represent estimates of total electricity generated by public utilities, factories generating for their own use, and factories supplying electricity for domestic and other consumption.

**NEW SOUTH WALES***Electricity Commission of New South Wales and electricity supply authorities*

The main function of the Commission is the generation and transmission of electricity, which it sells in bulk to distributing authorities (mainly local government bodies) throughout a large part of the State, to the Government railways and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources except in the Snowy Mountains region.

The retail sale of electricity to the public is, in general, carried out by separate electricity supply authorities. At 30 June 1984 there were 28 retail supply authorities throughout the State, comprising 23 electricity county councils (consisting of groups of shire and/or municipal councils), 1 city council, 1 shire council, and 3 private franchise holders.

Most electricity distribution areas have been consolidated into county districts consisting of a number of neighbouring local government areas grouped for electricity supply purposes and administered by a county council comprising representatives elected by the constituent councils. Of the 175 cities, municipalities and shires in New South Wales, 173 are included in one or other of the 23 electricity county districts.

*The Energy Authority of New South Wales*

The *Electricity Development Act 1945*, confers broad powers on the Energy Authority to co-ordinate and develop the public electricity supply industry. The functions of the Authority include the promotion of the wise use of electricity, especially its use for industrial and manufacturing purposes and for primary production. Technical advice is given to retail electricity supply authorities on various aspects of their activities such as the framing of retail electricity tariffs, public lighting and the standardising of materials and equipment.

The Authority continues to administer the Rural Electricity Subsidy Scheme which terminated on 30 June 1982. Under the scheme, the rural electrical development of the State has now been virtually completed in areas where the extension of supply is economically feasible. Local electricity suppliers receive subsidies from the Authority towards the cost of new rural lines. At 30 June 1985 the Authority was committed to the payment of \$46,924,963 in subsidies, of which \$42,199,510 had been paid. Further details of the operation of the scheme are given in Year Book No. 56, page 956.

The Authority also administers the Traffic Route Lighting Subsidy Scheme, which provides for financial assistance to councils towards the cost of installation of improved lighting on traffic routes traversing built-up areas with the objective of reducing the incidence of road accidents at night. Since the introduction of the scheme in 1964, subsidy has been approved in respect of some 2,325 kilometres of traffic routes throughout the State.

*Generation and transmission*

Of the State's electrical power requirements during the year ended 30 June 1984, almost all was generated in New South Wales (93.8 per cent by thermal fired power stations, 5.4 per cent from the Snowy Mountains Hydro-Electric Authority and 0.8 per cent by other hydro-electric stations). Interchange with other States and other small generating authorities in New South Wales was negligible.



*Major generating stations.* At 30 June 1984 the major power stations of the State system of the Electricity Commission of New South Wales and their nominal capacities were as follows: Liddell (Hunter Valley), 2,000 MW; Munmorah (Tuggerah Lakes), 1,400 MW; Vales Point (Lake Macquarie), 1,995 MW; Eraring, 2,640 MW; Wallerawang (near Lithgow), 1,240 MW. The total nominal capacity of the Electricity Commission's system as at 30 June 1984 was 10,665 MW. The greater part of the Commission's generating plant is concentrated within a hundred and eighty-five kilometre radius of Sydney.

*Major transmission network.* The retailing of electricity to 97 per cent of the population of New South Wales is in the hands of local distributing authorities, which obtain electricity in bulk from the Commission's major State network. This network of 500 kV, 330 kV, 220 kV, 132 kV, 66 kV and some 33 kV transmission lines links the Commission's power stations with the load centres throughout the eastern portions of the State, extending geographically over 650 kilometres inland.

At 30 June 1984 there were in service, 4,199 circuit kilometres of 330 kV, 283 kilometres of 220 kV, 7,628 kilometres of 132 kV transmission lines and 282 kilometres of 500 kV transmission lines. There were also in service 5,156 kilometres of transmission line of 66 kV and lower voltages, and 512 kilometres of underground cable. The installed transformer capacity at the Commission's 187 substations was 34,366 MVA.

*Separate systems and total State installed capacity.* Several local government bodies operate their own power stations and generate a portion of their requirements which is supplemented by interconnection with the system of the Electricity Commission. Of these, the more important are the Northern Rivers County Council (installed capacity 15.3 MW), the North-West County Council (16.4 MW) and the New England County Council (5.7 MW). The aggregate effective capacity for the whole of New South Wales systems and isolated plants was approximately 10,702 MW at 30 June 1984, while the number of ultimate consumers at this date was 2,165,672.

#### *Future developments*

Future projects include the installation of 3,960 MW of coal-fired generating plant. At Bayswater Power Station, which is situated in the Hunter Valley, construction has commenced on four 660 MW units. Two 660 MW units are also planned for Mount Piper Power Station which is located on the western coalfield near Wallerawang. Commissioning of the Bayswater units is planned between 1985 and 1987 with Mount Piper to follow in the early 1990s.

Construction of a double circuit 500 kV transmission line between Eraring and Kemps Creek, west of Sydney is complete. A double circuit 500 kV transmission link operating initially at 330 kV will be constructed from Bayswater Power Station to Mount Piper Power Station and thence to Marulan where it will be interconnected with the existing transmission system between the Snowy Mountains and Sydney.

#### *Hydro-electricity*

The greater part of the hydro-electric potential of New South Wales is concentrated in the Snowy Mountains area (see Snowy Mountains Hydro-Electric Scheme, page 420). Apart from this area, major hydro-electric stations are in operation at the Warragamba Dam (50 MW) and Hume Dam (50 MW). In addition, there are five smaller hydro-electric installations in operation in various parts of the State. A pumped-storage hydro-electric system to produce 240 MW has been installed as part of the Shoalhaven Scheme in conjunction with the Metropolitan Water Sewerage and Drainage Board.

## VICTORIA

### *State Electricity Commission (SEC)*

The SEC is Australia's largest electricity supply authority and individual coal producer. It is a semi-government authority with the principal responsibility of generating or purchasing electricity for supply throughout Victoria. It may own, develop and operate brown coal open cuts and briquetting plants and develop the State's hydro-electric resources. It is required to meet, from its own revenue, all expenditure involved with operating its power and fuel undertakings and to provide for statutory transfers to the consolidated revenue of the State. In 1984-85 its revenue was \$1,621 million. At 30 June 1985 it had total fixed assets of \$7,631 million and a staff of 22,500.

The SEC was established by an Act of the Victorian Parliament in 1921 and now operates under the *State Electricity Commission Act 1958*. Since it began operating, the SEC has expanded and co-ordinated the generation, purchase and supply of electricity on a statewide

basis to the stage where its system provides almost all the electricity produced in Victoria and its transmission covers almost the entire population of the State. At 30 June 1985 it distributed electricity directly to 1.424 million customers and indirectly to a further 277,800 through 11 metropolitan councils which buy power in bulk for retail distribution under franchises granted by the Victorian Government before the SEC's establishment.

#### *Existing electricity system*

The SEC Act requires the SEC to apply the natural resources of the State. Of the State's recoverable fossil fuel reserves, brown coal represents 94.6 per cent, natural gas 2.6 and oil 2.8. The SEC therefore has committed itself to increasing the proportion of total Victorian requirements met with coal based energy.

Victoria's electricity system is based upon the State's extensive brown coal resource in the Latrobe Valley 140 to 180 km east of Melbourne in central Gippsland. It is one of the largest single brown coal deposits in the world, amounting to 108,000 megatonnes of which 35,000 are economically winnable.

The coal is young and soft with a moisture content of 60 to 70 per cent and occurs in thick seams from relatively close to the surface to a depth of several hundred metres. The coal can be won continuously in large quantities and at low cost by a specialised mechanical plant. The SEC's coal-fired power stations have been established near the coal deposits because the coal's moisture content would make the coal expensive to transport, every three tonnes of material including two tonnes of water.

The major brown coal-fired generating plants in the system are the 2,000 MW Loy Yang A, the 1,600 MW Hazelwood and 1,450 MW Yallourn 'W' power stations. Other brown coal-fired plants are Morwell (170 MW) and Yallourn 'D' and 'E' (340 MW). These stations are all located in the Latrobe Valley and generate 80 per cent of the State's electricity requirement.

Other thermal stations are Jeeralang (465 MW) gas turbine station in the Latrobe Valley and Newport 'D' (500 MW) gas-fired station in Melbourne. There are hydro-electric power stations in north-eastern Victoria: Kiewa (184 MW), Dartmouth (150 MW), Eildon/Rubicon/Cairn Curran (135 MW). Victoria is also entitled to about 30 per cent of the output of the Snowy Mountains Hydro-Electric Scheme and half of the output of the Hume hydro-electric station near Albury.

The SEC's total installed generating plant capacity at 30 June 1985 was 6,603 MW, including both capacity within the State and that available to it from New South Wales. In 1984-85 electricity generated by the SEC in its thermal and hydro-electric power stations and purchased totalled 27,339 GWh.

#### *Power station construction*

Construction of the Loy Yang 'A' power station complex south-east of Traralgon in the Latrobe Valley was authorised by the Victorian Government in 1976. It is the largest single engineering project undertaken in Australia. Coal-fired, Loy Yang will provide base load electricity for the Victorian grid and almost double the State's generating capacity. The project nominally comprises two 2,000 MW power stations, Loy Yang 'A' and Loy Yang 'B' in eight 500 MW units. The first unit commenced commercial service in May 1984 and the second unit is scheduled to do so in November 1985.

#### *Transmission and distribution*

The distribution of electricity throughout Victoria has been completed, except for some isolated and remote areas of the State. Main transmission is by 500, 330, 220 and 66 kV transmission lines which supply the principal distribution centres and interconnection between generating sources.

Three 500 kV transmission lines, Australia's first, and six 220 kV lines link the Latrobe Valley stations with Melbourne and the State grid while three 330 kV lines provide the interstate link, two through the Snowy scheme. Bulk distribution of power throughout the main regional areas is by 220 kV lines to terminal stations which reduce the voltage to 66 kV or 22 kV for delivery to zone substations for further distribution. Feeder lines then deliver to distribution substations which in turn reduce the voltage to 415/240 volts for reticulation to individual customers. Some big industrial concerns take power at higher voltages.

The main transmission grid is currently being augmented to provide for increased power from the Latrobe Valley and to meet load growth in north-eastern and western areas of the State and the Mornington Peninsula.

Major development of the transmission system in 1983-84 included the completion of the first and second 500 kV lines from Loy Yang A power station to Hazelwood terminal station. In addition, the second 500 kV line between South Morang and Sydenham and the second 220 kV line between Geelong and Moorabool, were both completed during the year. Construction commenced on the Hazelwood to Narre Warren section of the fourth 500 kV line from the Latrobe Valley to Melbourne and construction is in progress on the 220 kV line from Moorabool to Ballarat.

## QUEENSLAND

### *Organisation*

The electricity supply industry in Queensland was restructured by Government legislation in 1984 by providing for the abolition of The Queensland Electricity Generating Board as from 1 January 1985, and the vesting of its assets and liabilities in The State Electricity Commission of Queensland. From that same date the name of the Commission was changed to the Queensland Electricity Commission. Under the terms of the *Electricity Act 1976-1984* the Queensland Electricity Commission is the arm of Government responsible for co-ordination and regulation of the electricity supply industry in Queensland; for regulation of the use of electricity to ensure safety; and for generation and bulk supply of electricity. In addition the Commission determines bulk supply and retail prices for the supply of electricity, and is empowered to borrow money necessary for the purposes of the industry.

Electricity is supplied to consumers by seven Electricity Boards, namely:

- The South East Queensland Electricity Board
- The South West Queensland Electricity Board
- The Wide Bay-Burnett Electricity Board
- The Capricornia Electricity Board
- The Mackay Electricity Board
- The North Queensland Electricity Board
- The Far North Queensland Electricity Board

Each of these organisations is constituted under the *Electricity Act 1976-84* to supply electricity to consumers within its geographic area.

### *Electricity generation, transmission and distribution*

During 1984-85 ninety-six per cent of the State's generation of 18,608 million kilowatt hours (GWh) was derived from coal-fuelled steam power stations. The hydro-electric stations located in North Queensland provided 3.2 per cent of the State's electricity needs with the remainder being produced by gas turbine and internal combustion generation using light fuel oil and natural gas. The Wivenhoe Pumped Storage Generating Station became fully operational during the year and produced 509 GW.h at times of peak system load while using 719 GW.h for pumping purposes. In addition a further 182.2 GW.h was purchased from private producers of electricity for redistribution to customers within the State wide interconnected system.

At 30 June 1985 the total generating capacity of the publicly owned power stations in the State was 4,816 megawatts (MW), comprising 3,946 MW of coal fired steam plant, 632 MW of hydro-electric plant, 178 MW of gas turbine plant and 60 MW of internal combustion plant. Details of the regional locations, types and capacities of the main power stations are listed in the following table.

## QUEENSLAND POWER STATIONS—CAPACITY AND TYPE, 30 JUNE 1984

(Source: Department of Resources and Energy)

Location	Type	Capacity (MW)
<b>SOUTHERN REGION</b>		
Swanbank A . . . . .	Steam . . . . .	396
Swanbank B . . . . .	Steam . . . . .	480
Swanbank C . . . . .	Gas turbine . . . . .	30
Tennyson . . . . .	Steam . . . . .	240
Bulimba . . . . .	Steam . . . . .	180
Middle Ridge . . . . .	Gas turbine . . . . .	60
Tarong . . . . .	Gas turbine . . . . .	15
Tarong . . . . .	Steam . . . . .	350
Wivenhoe . . . . .	Hydro (pumped storage) . . . . .	250
<b>CENTRAL REGION</b>		
Gladstone . . . . .	Steam . . . . .	1,650
Gladstone . . . . .	Gas turbine . . . . .	14
Callide . . . . .	Steam . . . . .	120
Rockhampton . . . . .	Gas turbine . . . . .	25
<b>NORTHERN REGION</b>		
Kareeya . . . . .	Hydro . . . . .	72
Barron Gorge . . . . .	Hydro . . . . .	60
Collinsville . . . . .	Steam . . . . .	180
Mackay . . . . .	Gas turbine . . . . .	34

At the end of June 1985 the transmission and distribution system within the State comprising 144,902 circuit kilometres of electric lines provided electricity to 981,608 customers. The main transmission voltages are 275 thousand volts (kV), 132 kV, 110 kV and 66 kV. The single wire earth return (SWER) system is used extensively in rural electrification and 43,598 kilometres of line for this system was in service at 30 June 1985.

*Future development*

A total of three 500 MW of generating capacity will be added to the system with the completion of three power stations now under construction. Progress at these stations is as follows:

- The second of Tarong Power Station's four 350 MW units was commissioned in June and all units are expected to be on line by the end of 1986.
- The two 350 MW generating units of the Callide 'B' Power Station are expected to be on line by 1989.
- The expected start-up date of the first of four 350 MW units at Stanwell Power Station is still uncertain and flexibility in scheduling work has been maintained to avoid overcommitment, while preserving the ability to supply new electrical loads as they arise.

During the past year the Government approved the acquisition of a number of coastal sites to be reserved for future power station development to reduce the likelihood of land use conflict. Four suitable sites have been secured for the development of power stations using sea water for cooling purposes. It is intended that these stations will be built over the next forty or so years.

**WESTERN AUSTRALIA***State Energy Commission of Western Australia*

On 1 July 1975 the Government of Western Australia combined the State Electricity Commission and the Fuel and Power Commission to form a new organisation known as the State Energy Commission of Western Australia. The Commission is specifically charged with the responsibility for ensuring the effective and efficient utilisation of the State's energy resources and for providing its people with economical and reliable supplies of electricity and gas.

The Commission owns and operates three major thermal power stations. These are located at Kwinana, Muja, and Bunbury and all use local coal to produce electricity. Kwinana power station also has the capacity to burn oil or natural gas. A small hydro-electric station is situated at Wellington Dam near Collie, and there are gas turbine generating units at Geraldton and Kwinana.

Power from the three major stations is fed to an interconnected grid system which supplies the electricity needs of 98 per cent of the State's population. The grid services the metropolitan area and the South West and Great Southern areas, including an area extending eastwards to Kalgoorlie and northwards as far as Kalbarri, some 100 km north of Geraldton. Kalgoorlie was brought into the south-west grid system in 1984 following construction of a 680 km transmission line from Muja, one of the longest radial feed lines constructed in Australia.

In areas too remote to utilise the interconnected grid system, diesel power stations are used. The Commission owns and operates 9 of these diesel stations. Of the remaining stations, 19 are owned by local authorities but operated by the Commission under the Country Towns' Assistance Scheme (CTAS).

The CTAS was introduced when steeply rising oil prices in the 1970s caused dramatic increases in country electricity prices. Under this scheme, the Commission operates the electricity undertakings but ownership remains with the shires which are required to raise the funds needed for capital works, including generating plant, distribution extensions and upgrading.

In areas supplied with power through the interconnected grid, or Commission owned and/or operated diesel power stations, uniform tariffs apply.

At 30 June 1985 the Commission's generating capacity from its interconnected grid system was 2,177 MW, while the capacity of its supply system in country areas was 171 MW.

The Commission is also the main supplier of gas in Western Australia. It operates an extensive gas reticulation system in the Perth metropolitan area and also makes supplies available at several country centres in the South West including Pinjarra, Bunbury and Albany. With the exception of Albany, where tempered liquefied petroleum (TLP) gas is fed into a local reticulation system, natural gas is the main gas fuel marketed by the Commission.

## SOUTH AUSTRALIA

### *Electricity Trust of South Australia*

In 1946 the assets of the Adelaide Electric Supply Co. Ltd were transferred to a newly-formed public authority, the Electricity Trust of South Australia, which became responsible for unification and co-ordination of the major portion of the State's electricity supply and which took over the powers previously vested in the South Australian Electricity Commission. In addition to the powers specified in the Adelaide Electric Supply Company's Acts, 1897-1931, the Trust may supply electricity direct to consumers within a district or municipality with the approval of the local authority; arrange, by agreement with other organisations which generate or supply electricity, to inter-connect the mains of the Trust with those of other organisations; and give or receive supplies of electricity in bulk.

### *Capacity and production*

Of the total installed capacity in South Australia at 30 June 1983, the Electricity Trust operated a plant with a capacity of 2,090 MW, making it the most important authority supplying electricity in the State. There were approximately 584,000 ultimate consumers of electricity in the State, of whom 575,295 were supplied directly and approximately 9,200 indirectly (i.e. through bulk supply) by the Trust. Its major steam stations are Osborne (240 MW), Port Augusta Playford 'A' (90 MW) and Playford 'B' (240 MW), and Torrens Island (1,280 MW). The Trust also operates a turbo-generator station at Dry Creek (156 MW), a small station at Port Lincoln (9 MW), and one at Snuggery (75 MW).

The two main fuels used by the Trust are sub-bituminous coal from Leigh Creek for the Playford power stations at Port Augusta and natural gas from the Gidgealpa-Moomba field for the Torrens Island and Dry Creek stations.

### *Future developments*

To meet future demands, a Northern Power Station comprising two 250 megawatt turbo-generators and boiler units is being constructed on a site near the existing power station at Port Augusta and will be commissioned before 1987.

The preferred strategy of the Advisory Committee on Future Electricity Generation Options is:

- to implement an opportunity energy interconnection with the Victorian-N.S.W. system, for commissioning in 1989;
  - to review in late 1985 the economics and need for an interim supply source in 1990.
- The review to be based on a third unit at the Northern Power Station, contract supply

- from Victoria, or conversion of 400 megawatts at Torrens Island to coal firing; or
- to implement a local lignite-fired station when feasible and required (on current indications, 1993).

The South Australian Government is currently considering these options.

## TASMANIA

A considerable part of the water catchment in Tasmania is at high level. The establishment of numerous dams has created substantial artificial storage which has enabled the State to produce energy at a lower cost than elsewhere in Australia and in most other countries. Another factor contributing to the low cost is that rainfall is distributed fairly evenly throughout the year with comparatively small yearly variations. Abundant and comparatively cheap supplies of electricity played an important role in attracting industry to Tasmania. For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930, see Year Book No. 39, pages 1192-3.

### *Hydro-Electric Commission*

The Commission was created in 1930, taking over the activities of the Hydro-Electric Department and the existing small hydro-electric installations. Development initially concentrated on hydro-electric generation feeding into a State-wide power grid (King Island from 1951 and Flinders Island from 1968 are outside the grid and are supplied by diesel generators). During 1967 the construction of a substantial oil fired thermal station with a capacity of 240 MW was approved, as a supplement to the continuing hydro development programme.

### *Output and capacity of hydro-electric system*

At 30 June 1985 the generating system had an installed capacity of 1940 MW. The approved remaining works at the Pieman River Power Development, scheduled for completion in 1986, will increase the system installed capacity to 2,171 MW.

Work began in 1982-83 on the Gordon River Power Development Stage 2 but was halted by the Federal government refusing consent for the project to proceed.

The Hydro-Electric Commission in August-September 1983 began work on two smaller hydro power schemes in Western Tasmania. These are the King River Power Development scheduled for completion in mid 1990 and the Anthony Power Development which is expected to be commissioned 18 months later. They will add about 236 MW to the installed capacity of the system.

## AUSTRALIAN CAPITAL TERRITORY

The supply authority is the A.C.T. Electricity Authority which took over the functions of the Canberra Electric Supply Branch, Department of the Interior, on 1 July 1963. Supply was first made available in Canberra during 1915 and was met from local steam plant. Connection to the New South Wales interconnected system was effected in 1929. The Authority's electricity supply requirements are met by a Snowy Mountains reservation of 670 GWh and the balance is provided by the Electricity Commission of New South Wales. The locally-owned plant consists of 3 MW diesel alternators which are retained as a standby for essential supplies. The total number of ultimate consumers at 30 June 1985 was 90,776. During the year 1984-85 the bulk electricity purchased was 1,763 GWh and the system maximum demand was 496 MW.

## NORTHERN TERRITORY

The Northern Territory Electricity Commission is a Statutory Authority operating under the *Northern Territory Electricity Act 1978* (as amended to date), with responsibility for generation, distribution, transmission and sale of electricity in the Northern Territory.

In Darwin, the major electricity source is the oil fired Stokes Hill Power Station, with an installed capacity of 141 MW. A standby gas turbine is located at Berrimah. In Alice Springs, power is generated at the Ron Goodin Power Station which operates on dual fuel including natural gas. Installed capacity is 36.46 MW. Other Territory centres where power is generated by NTEC are diesel generating stations using distillate fuel.

A \$380 million natural gas pipeline from the Amadeus Basin natural gas fields in Central Australia to Darwin is currently under construction and is scheduled to be completed by December 1986 to coincide with the commissioning of the first gas turbine at the new Channel Island Power Station at Darwin.

Channel Island Power Station will use natural gas to generate electricity and will be the first power station in Australia to use combined cycle plant. A contract worth \$75 million was signed on 2 September 1985 between the Northern Territory Electricity Commission and a consortium comprising the Marubeni Corporation, John Brown Engineering and Toyo Engineering for the supply of gas turbines and combined cycle plant with a generating capacity of 186 MW. Negotiations are continuing for the purchase of an additional 31 MW open cycle gas turbine to be installed in the future.

Under the terms of the contract the Marubeni consortium will supply five GEC Frame 6 gas turbines manufactured by John Brown Engineering, two heat-recovery steam generators (boilers) to be heated by exhausts from two of the gas turbines, one steam turbine and condenser, control equipment, transformers and auxiliary equipment.

In addition to Darwin, NTEC power stations at the regional centres of Katherine and Tennant Creek will be converted to natural gas fuel operation. Installed capacity at Katherine is currently 14.38 MW and at Tennant Creek 9.36 MW.

Many small communities in the Territory generate their own power using diesel-fired generating sets and responsibility for these operations has been transferred from the Department of Transport and Works to NTEC.

### Electricity and gas establishments

The census of electricity and gas industries covers distribution as well as production and is conducted as a component of the ABS's integrated economic statistics system. This system has been developed so that data from each industry sector conform to the same basic conceptual standards thereby allowing comparative analysis between and across different industry sectors. The results of this census are therefore comparable with economic data collections undertaken annually for the mining and manufacturing industries and periodically for the retail and wholesale trade, construction, transport and selected services industries.

The following table shows a summary of operations of electricity and gas establishments for 1983-84. Further details are available in the publication *Electricity and Gas Establishments: Details of Operations, Australia, 1983-84* (8208.0).

ELECTRICITY AND GAS ESTABLISHMENTS—SUMMARY OF OPERATIONS, 1983-84

State or Territory	Establishments at 30 June	Employment at 30 June			Wages and salaries (\$'000)	Turnover (\$'000)	Stocks		Purchases, transfers in and selected expenses (\$'000)	Value added (\$'000)	Fixed capital expenditure less disposals (\$'000)
		Males (No.)	Females (No.)	Total (No.)			Opening (\$'000)	Closing (\$'000)			
New South Wales											
Electricity . . .	33	27,256	2,749	30,005	663,529	4,110,187	374,301	357,695	2,216,881	1,876,700	1,067,926
Gas . . . . .	20	2,406	574	2,980	57,033	388,607	34,478	31,005	232,963	152,172	19,024
Queensland											
Electricity . . .	12	11,374	1,465	12,839	278,725	2,095,702	123,742	143,135	910,606	1,204,489	1,019,047
Gas . . . . .	7	620	122	742	14,091	87,233	8,315	8,325	44,737	42,506	5,813
Other States and Territories (a)											
Electricity . . .	37	36,732	3,061	39,793	890,252	3,583,625	198,331	212,668	1,529,204	2,068,757	1,460,207
Gas . . . . .	7	5,883	939	6,822	146,738	910,600	30,120	32,723	355,886	557,316	543,712
Australia											
Electricity . . .	82	75,362	7,275	82,637	1,832,505	9,789,515	696,375	713,497	4,656,689	5,149,947	3,547,181
Gas . . . . .	34	8,909	1,635	10,544	217,862	1,386,441	72,912	72,053	633,586	751,995	568,549

(a) Includes Victoria, South Australia, Western Australia, Tasmania, Northern Territory and Australian Capital Territory. At the end of June 1984 the number of establishments were: Victoria—electricity 14, gas 1; South Australia—electricity 11, gas 2; Western Australia—electricity 7, gas 2; Northern Territory—electricity 2 and Australian Capital Territory—electricity 1, gas 1.

### National Energy Survey

In June 1983 the ABS conducted a survey throughout Australia to obtain information relating to the numbers and types of selected domestic appliances held by households. Details were also sought from the relevant energy supplying authorities on the consumption of electricity and reticulated gas by households for the most recent 12 month period available.

The survey was conducted as part of the regular ABS population survey, which is based on a multi-stage area sample of private dwellings (houses, flats, etc.) and non-private dwellings (hospitals, hotels, motels, etc.) and covers about two-thirds of one per cent of the population of Australia.

For the purposes of this National Energy Survey certain types of dwellings were excluded, such as non-private dwellings, caravan parks, dwellings occupied by more than one household, and dwellings occupied by diplomatic personnel and by overseas residents. The survey identified a small number of households without electricity, and these were also excluded.

For each State a magnetic tape file is now available containing information from the National Energy Survey. An example of consumption data available is shown in the following table on Average Consumption of Reticulated Gas and Electricity by Households, by State and Capital City.

Further data relating to the survey can be found in ABS publications listed in the Bibliography at the end of this chapter.

**AVERAGE CONSUMPTION OF RETICULATED GAS AND ELECTRICITY BY HOUSEHOLDS, BY STATE AND CAPITAL CITY(a), 1982-83**

	<i>Households with reticulated gas</i>			<i>Households without reticulated gas</i>			
	<i>Average annual consumption</i>			<i>Average annual consumption of</i>			
	<i>Number of households</i>	<i>Gas</i>	<i>Electricity</i>	<i>Number of households</i>	<i>electricity</i>	<i>Total</i>	
	( <i>'000</i> )	( <i>MJ</i> )	( <i>MJ</i> )	( <i>'000</i> )	( <i>MJ</i> )	( <i>'000</i> )	( <i>MJ</i> )
New South Wales . . . . .	391.3	16,059	16,807	1,370.9	26,746	1,762.2	24,539
<i>Sydney</i> . . . . .	327.7	15,438	17,027	809.4	27,023	1,137.1	24,143
Victoria . . . . .	824.1	53,688	17,146	469.8	28,076	1,293.9	21,115
<i>Melbourne</i> . . . . .	707.1	54,620	17,437	214.7	27,761	921.8	19,842
Queensland . . . . .	102.4	9,570	14,314	678.0	23,275	780.5	22,099
<i>Brisbane</i> . . . . .	93.5	9,559	14,414	273.4	24,210	366.9	21,714
South Australia . . . . .	218.1	25,801	15,036	245.5	27,494	463.6	21,632
<i>Adelaide</i> . . . . .	206.9	25,861	15,105	128.2	28,245	335.1	20,132
Western Australia . . . . .	135.0	16,671	12,521	300.6	17,689	435.6	16,087
<i>Perth</i> . . . . .	129.4	16,796	12,607	188.8	18,146	318.2	15,893
Tasmania (b) . . . . .						138.0	33,861
<i>Hobart (b)</i> . . . . .						53.7	34,941
Northern Territory (b) . . . . .						33.3	27,295
Australian Capital Territory (b) . . . . .						74.0	37,936

(a) Refers to Capital City Statistical Division. (b) Reticulated gas consumption not available.

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### ABS Publications

Directory of ABS Energy Statistics (1107.0).

National Energy Survey: Household Appliances, Facilities and Insulation, Australia, June 1983 (8212.0).

National Energy Survey: Household Energy Consumption, Australia, June 1982-83 (8213.0).

### Other Publications

Other organisations which produce statistics in this field include the Department of Resources and Energy, the Joint Coal Board, the Australian Institute of Petroleum, the Electricity Supply Association of Australia and the Bureau of Mineral Resources, Geology and Geophysics. State Government departments and instrumentalities also are important sources of energy data, particularly at the regional level, while a number of private corporations and other entities operating within the energy field also publish or make available a significant amount of energy information.



## THE SNOWY MOUNTAINS HYDRO-ELECTRIC SCHEME

*(This special article has been contributed by the Snowy Mountains Hydro-Electric Authority)*

In April 1966 the first diversion of water was made from the Snowy River to the Murray River, one of the many milestones in the Snowy Mountains Scheme. Twenty years later this article looks back at the development, construction and performance of the Scheme.

### General description

The Snowy Mountains Scheme is a dual purpose hydro-electric and irrigation complex located in south-eastern Australia. It impounds the south-flowing waters of the Snowy River and its tributary, the Eucumbene, at high elevations and diverts them inland to the Murray and Murrumbidgee Rivers, through two tunnel systems driven through the Snowy Mountains. The Scheme also involves the regulation and utilisation of the headwaters of the Murrumbidgee, Tumut, Tooma and Geehi Rivers.

The diverted water, together with regulated flows in the Geehi and Tumut River catchments, generates mainly peak-load electricity for the States of New South Wales and Victoria and the Australian Capital Territory, as the water passes through power stations to the irrigation areas inland from the Snowy Mountains. The Scheme reached its designed capacity in 1974 after twenty-five years of construction.

### Features of the Scheme

- Sixteen large dams
- 80 km of aqueducts
- Over 145 km of tunnels
- A pumping station
- Five surface and two underground power stations

which provide:

- (a) a generating capacity of 3 740 MW; and
- (b) 2 360 GL annually of water for irrigation in the Murray and Murrumbidgee rivers.

Broadly, the Scheme falls into two sections: the northern, Snowy-Tumut development; and the southern, Snowy-Murray development. Both developments are connected by tunnels to the Scheme's main regulating storage, Lake Eucumbene, on the Eucumbene River.

### Snowy-Tumut development

The Snowy-Tumut development provides for the diversion of the Eucumbene, the Upper Murrumbidgee and the Tooma Rivers to the Tumut River, and for the combined waters of these four rivers to generate electricity in four power stations (Tumut 1, Tumut 2, Tumut 3 and Blowering) in their fall of 800 m before release to the Tumut River and thence to the Murrumbidgee River.

The trans-mountain tunnel system includes the Eucumbene-Tumut tunnel, connecting Lake Eucumbene with Tumut Pond reservoir. The normal function of the tunnel is to divert water through the Great Dividing Range from Lake Eucumbene to the Tumut River, but during periods of high flow in the Tumut and Tooma Rivers, water in excess of that required for operating the power stations along the Tumut River is diverted in a reverse direction through the tunnel to Lake Eucumbene for storage.

The total installed capacity in Tumut 1, Tumut 2, Tumut 3 and Blowering Power Stations is 2 180 MW. This section of the Scheme enables 1 380 GL of additional water to be provided over a year to the Murrumbidgee River. This water has enabled irrigation production to be increased and new areas to be developed in the Murrumbidgee Valley.

### Snowy-Murray development

The Snowy-Murray development involves the diversion of the Snowy River, by a trans-mountain tunnel system, to the Geehi River, the diverted waters falling some 800 m and generating up to 1 500 MW in Murray 1 and Murray 2 Power Stations. Additional power is generated in the 60 MW Guthega Power Station which makes use of the rapidly falling water of the Upper Snowy River on the east of the Divide before it reaches the main tunnel system at Island Bend.

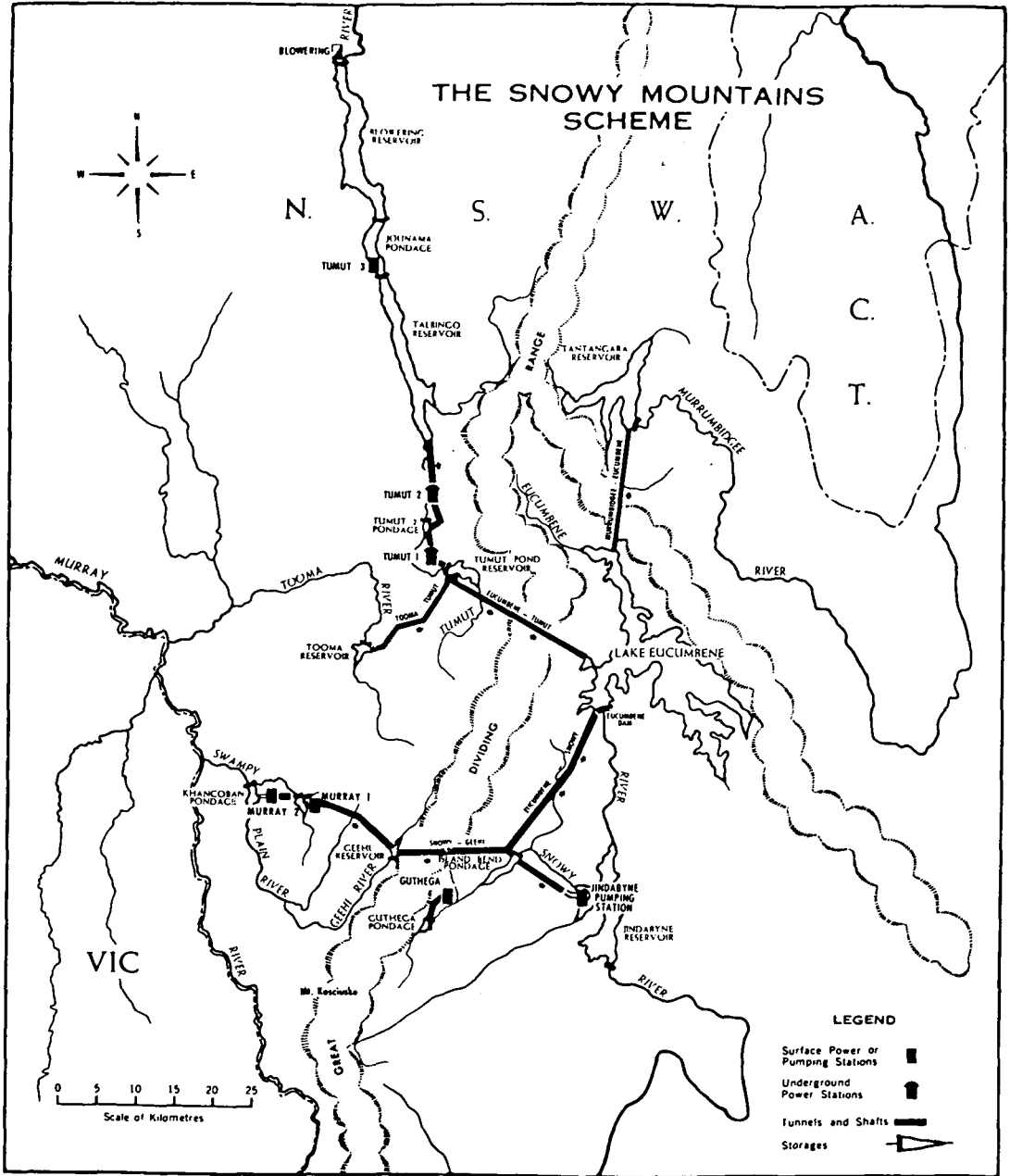


PLATE 38

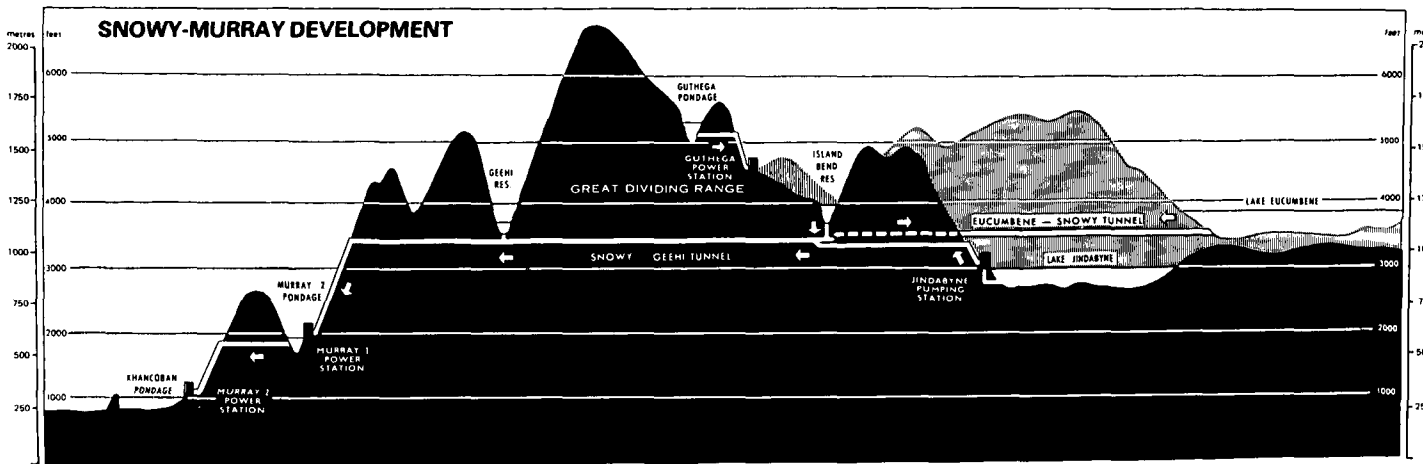
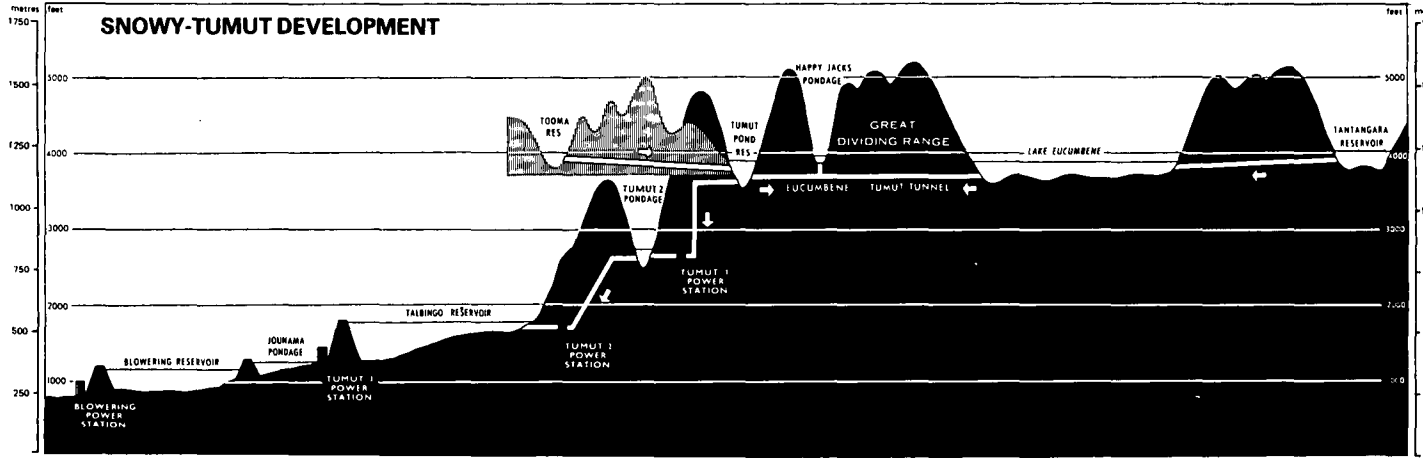


PLATE 39

An essential part of this development is the two-way Eucumbene-Snowy tunnel which connects the Snowy River with Lake Eucumbene. When the flows in the Snowy and Geehi Rivers exceed the needs of the Murray Power Stations, water from the Snowy River at Island Bend is diverted through this tunnel for storage in Lake Eucumbene. Low flows in the Snowy and Geehi Rivers are supplemented by diverting the stored water from Lake Eucumbene back through the same tunnel and delivering it to the trans-mountain tunnel system leading to the Murray power stations.

Additional water is supplied to the trans-mountain tunnel system near Island Bend by the Jindabyne project which pumps, from Lake Jindabyne, the run-off from the Snowy catchment downstream of Island Bend.

The Snowy-Murray Development enables 980 GL of additional water to be provided over a year, through the Hume Reservoir, to the Murray River for irrigation in the Murray Valley.

### Construction

In 1947, a Committee of State and Commonwealth officers was formed to examine the development of the water resources of the Snowy Mountains area in the broad national interest. This followed previous single purpose proposals for using some of these resources which dated back to the early 1880s.

The Commonwealth Government passed the *Snowy Mountains Hydro-electric Power Act* in 1949 which gave the Snowy Mountains Hydro-electric Authority the responsibility for the final investigation, design and construction of the Snowy Mountain Scheme, one of the largest single engineering works ever to be undertaken in Australia up to that time. The enterprise was established as 'a milestone towards full national development' and in serving the dual purpose of satisfying the need for increased generating capacity following World War II and diverting the Snowy River inland to the dry west was greeted with enthusiasm by the people of Australia.

One of the earliest tasks of the Authority was to obtain detailed survey, hydrological and geological information in steep, mountainous terrain. The analysis of this information together with advances in technology and the higher than anticipated growth in demand for electricity led to changes to the Scheme as originally proposed by the Commonwealth-States Committee. The main diversion of Snowy River water to the Murray River was made at a higher level as a consequence of the availability of dam sites and a pumping station was installed at Jindabyne for diversion of water from its lower reaches. A pumped storage project was incorporated at Tumut 3 and a number of proposed power stations were incorporated into single larger stations. In all there was a reduction in the number of power stations from 16 as originally proposed to 7 and an increase in generating capacity from 2 820 MW to 3 740 MW.

Besides the gathering of technical data, the early problems of the Authority were the establishment of stores, workshops, laboratories, offices and accommodation. Initially building materials needed to be brought from overseas in meeting priorities for post war construction. Communications needed to be developed over the area as well as road systems, camps and townships. Some 1 600 km of roads were constructed and townships and main camps established at over 100 locations. Community services and amenities were also a need for the construction and associated forces which numbered over 7,300 personnel at the peak of construction in 1959.

Initially, the design of major works was undertaken by the United States Bureau of Reclamation while appropriate staff were recruited from within Australia and overseas and younger engineers were trained by the Bureau.

In the early projects of the Scheme a major change was made in the construction management of large civil engineering works. Whereas works had been traditionally constructed by day labour in Australia, the contractual system was adopted. This led to the introduction into Australia of large overseas firms which has no doubt been of great benefit to construction in Australia. Overseas contractors using Australian and New Australian labour surpassed previous world tunneling records on many occasions. Electrical and mechanical plant was also supplied by contract to Authority specifications and at the time of construction, certain features of the Murray 1 and Tumut 3 Power Stations were of the largest attempted in the world.

Significant advances were also made in the use of rock bolts to reduce concrete lining of tunnels and underground structures.

Throughout construction a high standard of safety measures was employed and construction was renowned for the lack of industrial disputes. Undoubtedly, much of the credit for the construction of the Scheme was due to the leadership of the late Sir William Hudson K.B.E. who was Commissioner of the Authority from 1949 to 1967.

Although the Scheme was constructed at a time when the question of the effect of public works on the environment was not such a public issue as it is today this is not to say, however, that environmental aspects were not considered during design and construction. A high priority was given to soil conservation techniques and significant achievements were made in this field as well as in the protection of natural assets of the area. Under present conditions, when major environmental impact statements would be required, progress on the Scheme could have been delayed while some of the issues were resolved.

Generation commenced from the Scheme in February 1955 with the completion of the 60 MW Guthega project; and Eucumbene Dam, providing the main storage for the Scheme, was completed in May 1958.

The first transmountain diversion of water via the Eucumbene-Tumut Tunnel to the Tumut River was made in June 1959. On 1 May 1962, the Upper Tumut Works were declared in full operation marking the completion of the Tumut 1 and 2 Power Stations (600 MW), the Tooma-Tumut and Murrumbidgee-Eucumbene Diversions and the accumulation of sufficient water in Lake Eucumbene to provide regulation of water over dry periods.

Blowering Dam, which was constructed by the Authority for the State of New South Wales to regulate releases from the Scheme to the Tumut River for irrigation, came into service in May 1968 and the 80 MW Blowering Power Station began operation in August 1971. In April 1966 the first diversion of water was made from the Snowy River to the Murray River with the commissioning of the first two units at Murray 1 Power Station, and the Snowy-Murray Development was declared in full operation on 1 July 1970.

The Scheme reached its designed capacity of 3,740 MW in August 1974 when the last unit of the 1,500 MW Tumut 3 project was brought into service.

#### **Snowy Mountains Hydro-Electric Power Act**

This Act, passed in 1949, established the Snowy Mountains Hydro-electric Authority, and empowered it to provide hydro-electric works in the Snowy Mountains Area. The Authority was also empowered to supply electricity to the Commonwealth Government (i) for defence purposes, (ii) for consumption in the A.C.T. and (iii) to supply to a State, or to a State Authority, electricity not required for defence purposes or for consumption in the A.C.T.

Certain resolutions were adopted in July 1949 between Ministers of the Commonwealth and States with respect to the development and use of the water resources of the area for the generation of electricity, for the provision of water for irrigation and the sharing of water between the States. However, it was not until August 1959 when works of the Scheme were well advanced that a detailed Agreement between the States of NSW and Victoria and the Commonwealth Government was incorporated in the Act and joint legislation enacted by the States with regard to the construction and operation of the Scheme, the distribution of power and water, charges to be made for electricity and other such matters.

The Agreement also resolved differing opinions as to the constitutional powers of the Commonwealth Government with regard to the water resources of the Snowy Scheme. Under the provisions of the agreement the Commonwealth Government made a reservation of 670 GWh from the energy output of the Scheme of just over 5,000 GWh per annum, the remainder being shared between the States of New South Wales and Victoria in the ratio 2:1.

#### **Operation and maintenance**

Under the terms of the 'Agreement', the Snowy Mountains Council was established. One of the main duties of the Council is to direct and control the operation and maintenance of the permanent works of the Authority for the control of water and production of electricity. The Council consists of eight members; the Chairman and Deputy Chairman representing the Commonwealth, two representatives appointed by the State of New South Wales, two representatives appointed by the State of Victoria and the Commissioner and one other member appointed by the Authority. Since the first meeting in 1959, the State representatives have been appointed from the respective Electricity and Water Commissions.

Directions by the Council are carried out by an Operations Engineer and two Assistant Operations Engineers appointed by Council. The Operations Engineer is nominated by the Authority and an Assistant Operations Engineer is nominated by each of the Electricity Commissions of New South Wales and Victoria.

Operation of the Scheme with appropriate provision for maintenance is coordinated through a series of interlocking operating plans with the objective of optimising the use of water for irrigation and electricity production within legal and physical characteristics of the

Scheme. The plans are prepared by officers of the Authority and the Electricity and Water Commissions for consideration by Council.

Daily operation of the Scheme is scheduled from a Works Operation Centre in Cooma with the main State Electricity Control Centres at Richmond in Victoria and Carlingford in New South Wales. Instructions for operations are passed from the Works Operations Centre to Regional Control Centres located within the Scheme for physical implementation.

Releases from the Scheme into the Murray River come under the control of the River Murray Commission which apportions the water between New South Wales, Victoria and South Australia. Most of the water released into the Tumut River is used by New South Wales for irrigation in the Murrumbidgee Valley.

At the end of June 1985, the number of personnel employed in the Operation and Maintenance of the Scheme was 727, comprising 657 Authority personnel, 47 from the Electricity Commission of NSW and 27 from the State Electricity Commission of Victoria. Under the 'Agreement', the generating stations of the Scheme are manned by Electricity Commission personnel.

#### **Performance of the Scheme**

In the formative years of the Scheme, there were critics of its long-term economic viability in view of projected reductions in the cost of production from thermal plant as a consequence of increases in thermal efficiencies and the construction of large thermal plants adjacent to coalfields. As events have proved, the investment in the Scheme for hydro-electricity generation alone has been of great value. This arises firstly from the fact that a large proportion of the costs of hydro works are in the civil works such as dams and tunnels, etc., which have extremely long economic lives compared with thermal plants, and the fact that the operational costs are relatively low, whereas thermal plant have continuing fuel costs which are subject to the effects of changing economic conditions.

In 1984-85, the average cost of energy production by the Scheme was 2.1 cents per kilowatt hour being less than half the cost of electricity sold to bulk consumers by the Electricity Commission of New South Wales and Victoria in that year.

The connection of the Scheme since 1959 by 330 kV transmission lines to the electricity systems of New South Wales and Victoria has also been of significant economic advantage. This has enabled sharing of reserves and the interchange of electricity between New South Wales and Victoria to their mutual advantage in optimising system costs.

Extensive use has also been made of the power and pumping stations of the Scheme to provide spinning and fast reserve for both States from interrupting pumping, partially loaded units, changeover from synchronous condenser operation and the ability to start hydro units quickly with consequent savings in fuel costs of thermal plants.

When the Scheme reached its designed capacity of 3,740 MW in 1974, this figure represented 33 per cent of the capacity of the combined New South Wales, Victoria and Snowy systems, and during shortages of thermal generating plant the Scheme has been called upon to operate at the limit of the diversion capacity available.

The Scheme was designed to produce peak electricity, and good flexibility exists on a short-term basis although it is not able to replace base load generation for prolonged periods. Some increase in the diversion capacity of the Scheme may have been of advantage, but channel capacity of the rivers below the outlets of the Scheme as well as irrigation considerations limit prolonged, high discharge operation.

Because of the high degree of regulation of water available through Lake Eucumbene, a firm minimum release of water equivalent to 85 per cent of average releases is available each year. This release not only allows firm planning for electricity production but also for irrigation.

The regulation of water provided by the Scheme played an important part to mitigate the effect of very severe droughts in 1967-68 and in 1982-83 in the irrigation areas of south-eastern Australia. In 1982-83, the storage in the Scheme was reduced to 18 per cent of capacity and natural inflows to some irrigation catchments were described as being substantially below those previously recorded over some 100 years of available records.

The Scheme, however, has not been without its problems, the most significant of which was a collapse of an unlined section of the Eucumbene-Snowy Tunnel in 1970.

Major electrical and mechanical plants have performed well, but as some of this equipment has been in operation for 30 years, the time has come where replacements can be necessary. This situation also applies to communication and control systems where arrangements are in hand for replacement with high technology systems now available.

**Conclusion**

It may still be too early to assess the true significance of the construction of the Snowy Scheme particularly in regard to the inland diversion of waters. However, the Scheme has demonstrated its value in producing peak hydro-electricity, in conjunction with generating plants of predominantly thermal generators, and the objective of increasing regulated supplies of water to the Murray and Murrumbidgee Valleys.

Construction of the Scheme has also brought new skills to Australia and greatly enhanced the recreation facilities in the Snowy Mountains area. The social impact of the Scheme on the region has also no doubt been significant on the increase in size and prosperity of towns serving the area.

## CHAPTER 19

### HOUSING AND CONSTRUCTION

This chapter gives details of: the characteristics of dwellings obtained from censuses, government activities in the field of housing, financial arrangements associated with the erection or purchase of homes, a summary of building activities, summary of construction (other than building) activities, and summary of construction industry statistics.

Details of some other Government housing and accommodation assistance are provided in Chapter 9 'Social Security and Welfare' including Aged or Disabled Persons Homes, Handicapped Persons Assistance, Homeless Persons Assistance, and Youth Services Scheme.

#### HOUSING

##### Census dwellings

Further information on dwellings obtained from censuses is available in the detailed tables of the publications issued for each individual census. A list of the 1981 Census publications is shown in the *ABS Catalogue of Publications, Australia* (1101.0). The most relevant 1981 census publication is *Summary Characteristics of Persons and Dwellings* (2435.0-2443.0). More detailed dwellings information is available on microfiche. Tables are listed in the *Catalogue of 1981 Census Tables* (2139.0).

At each census of the population, in addition to the questions relating to personal particulars, there have been a number of questions relating to dwellings. A 'dwelling' is defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building, and includes, in addition to houses and self-contained flats, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. This section contains particulars of such information on dwellings as is available from the 1981 Census, together with information from earlier censuses.

##### Number of dwellings

The following table shows the number of occupied and unoccupied dwellings in Australia at each census from 1947 to 1981. Occupied dwellings are classified into 'private' and 'non-private' dwellings.

**Private dwellings** were classified by the census collector for the 1981 Census; collectors allocated each dwelling to one of the following categories:

- Separate house*
- Semi-detached house*
- Row or terrace house*
- Medium density housing*
- Flat over three storeys*
- Caravan, houseboat, etc.*
- Improvised home*
- House or flat attached to a shop, office, etc.*

**Non-private dwellings** include hotels, motels, boarding houses and hostels, educational, religious and charitable institutions, hospitals, defence and penal establishments, caravan parks, staff barracks and quarters, etc.

**An unoccupied dwelling** is defined as a structure built specifically for private living purposes and which is habitable though unoccupied at the time of the Census. The total number of unoccupied dwellings shown for any area does not represent the number of vacant dwellings available for sale or renting.



## DWELLINGS(a): AUSTRALIA, CENSUSES, 1947 TO 1981

Census	Occupied			Unoccupied
	Private	Non-private	Total	
1947 . . . . .	1,873,623	34,272	1,907,895	47,041
1954 . . . . .	2,343,421	36,932	2,380,353	112,594
1961 . . . . .	2,781,945	35,325	2,817,270	194,114
1966 . . . . .	3,155,340	33,917	3,189,257	263,873
1971 . . . . .	3,670,553	24,006	3,694,559	339,057
1976 . . . . .	4,140,521	21,543	4,162,064	431,200
1981 . . . . .	4,668,909	22,516	4,691,425	469,742

(a) Excludes dwellings occupied solely by Aborigines before 1966.

The total number of occupied and unoccupied dwellings in each State and Territory at the Censuses of 1976 and 1981 were as follows:

## DWELLINGS: CENSUSES, 1976 AND 1981

State or Territory	Census 30 June 1976		Census 30 June 1981	
	Occupied(a)	Unoccupied	Occupied(a)	Unoccupied
New South Wales . . . . .	1,499,001	152,960	1,669,596	153,251
Victoria . . . . .	1,126,304	119,592	1,243,453	124,522
Queensland . . . . .	602,426	62,686	703,964	83,366
South Australia . . . . .	392,253	39,768	433,841	42,407
Western Australia . . . . .	339,105	34,064	405,999	42,100
Tasmania . . . . .	122,573	15,786	136,269	17,765
Northern Territory . . . . .	23,270	2,292	29,563	2,368
Australian Capital Territory . . . . .	57,132	4,052	68,740	3,963
<b>Australia . . . . .</b>	<b>4,162,064</b>	<b>431,200</b>	<b>4,691,425</b>	<b>469,742</b>

(a) Includes non-private dwellings.

### Commonwealth Government and Housing

Commonwealth Government activities in the housing field have in the main included assistance to first home buyers under the former Home Savings Grant and Home Deposit Assistance Schemes and the current First Home Owners Scheme, financial assistance to defence (and eligible ex-service) personnel in the erection and purchase of homes; the operations of the Housing Loans Insurance Corporation; and the provision of financial assistance to the States and the Northern Territory through the Commonwealth-State Housing Agreement which provides home purchase and rental housing assistance and operates a number of special programs to assist specific groups of people in housing need.

#### Home Deposit Assistance Scheme

Replacement of the Home Savings Grant (HSG) Scheme by the *Home Deposit Assistance Scheme* (HDAS) was announced in March 1982 and received Royal Assent on 2 June 1982. While applications have not been accepted since August 1982, under HSG, a small number of applications remain to be processed following the determination of appeals and the provision of additional information. Expenditure on HSG in 1984-85 was \$126,000. The HDAS relates to first homes acquired on or after 18 March 1982 and up to 30 September 1983. This Scheme was income tested to provide direct assistance to low to moderate income earners. Grants are paid on the basis of \$1 for each \$1 saved over a two year period and held in an acceptable form. There is no restriction on the age, sex, or marital status of applicants or the number of persons making a joint application. The home can be either newly constructed or an established home, home unit or flat. The savings requirement was removed for those homes acquired between 1 August and 30 September 1983. The following table sets out the operations of HDAS during 1984-85.

## HOME DEPOSIT ASSISTANCE SCHEME: OPERATIONS 1984-85

State	Number of Applications			Amount of grants paid (\$'000)
	Inquiries	Received	Approved	
New South Wales . . . . .	11,587	1,118	2,106	5,556
Victoria . . . . .	11,477	852	2,180	5,476
Queensland . . . . .	1,262	612	830	2,085
South Australia/Northern Territory . . . . .	1,878	278	472	1,090
Western Australia . . . . .	1,294	183	371	943
Tasmania . . . . .	217	58	164	384
Australian Capital Territory . . . . .	342	53	89	215
<b>Australia . . . . .</b>	<b>28,057</b>	<b>3,154</b>	<b>6,212</b>	<b>15,749</b>

**First Home Owners Scheme**

The First Home Owners Scheme was introduced on 1 October 1983. Applications for assistance under the *First Home Owners Act 1983* may be made by persons who contract to buy or build or who commence constructing their first home in Australia on or after 1 October 1983. There is no restriction on the marital status or age of the applicant. The home must be intended as the applicant's principal place of residence. At least one applicant must be an Australian citizen or must have the right to reside here permanently. Applicants cannot have owned a home in Australia previously, received assistance under the First Home Owners Scheme, or a grant under the Home Savings Grant Scheme or Home Deposit Assistance Scheme.

On 16 April 1985 the Federal Government announced a change in the benefit levels for people contracting to buy or build their first home from 17 April 1985. People contracting for their first home prior to that date are unaffected by the change.

Therefore for homes acquired between 1 October 1983 and 16 April 1985, the maximum assistance available over 5 years is:

- \$5,000 for applicants with no dependent children;
- \$6,500 for applicants with one dependent child;
- \$7,000 for applicants with two or more dependent children.

For homes acquired on or after 17 April 1985, the maximum assistance available over 5 years is:

- \$4,000 for applicants with no dependent children;
- \$5,500 for applicants with one dependent child;
- \$6,000 for applicants with two or more dependent children.

A dependent child includes a child born or adopted up to 11 months after home acquisition and also includes a student aged 16-25. All assistance is non-repayable and tax-free.

The amount of assistance payable relates directly to the amount of taxable income of all applicants, including breadwinner and spouse. People acquiring their first home after 1 October 1983 and before 22 August 1984 are generally subject to an income test on their taxable income for the year before home acquisition. If requested by the applicant, income for the current financial year may be tested. New arrivals will be tested against income in the first full year as a taxpayer.

Income limits on taxable income for a home acquired after 1 October 1983 and before 22 August 1984 are:

- full assistance for incomes up to \$24,300;
- partial assistance for incomes up to \$27,900;
- no assistance is payable on incomes over \$27,900.

For people buying their first home on or after 22 August 1984, new income limits have applied:

- full assistance for sole applicants without dependent children for income up to \$10,000. For incomes over \$10,000 assistance is reduced until at \$13,950 no assistance is payable;
- for all other applicants maximum assistance will be payable where income does not exceed \$20,000, with assistance phasing out altogether at \$27,900.

**MAXIMUM ASSISTANCE AVAILABLE AND OPTIONS  
FOR HOMES ACQUIRED FROM 17 APRIL 1985**

<i>Benefit Options</i>	<i>No Dependants</i>	<i>One Dependant</i>	<i>Two or more Dependants</i>
Option 1	\$	\$	\$
Subsidy only	4,000	5,500	6,000
Option 2			
Subsidy	2,300	3,800	3,800
Lump Sum	1,200	1,200	1,700
Option 3			
Subsidy	1,250	2,250	2,250
Lump Sum	2,000	2,500	3,000

**MAXIMUM ASSISTANCE AVAILABLE AND OPTIONS  
FOR HOMES ACQUIRED BEFORE 17 APRIL 1985**

<i>Benefit Options</i>	<i>No Dependants</i>	<i>One Dependant</i>	<i>Two or more Dependants</i>
Option 1	\$	\$	\$
Subsidy only	5,000	6,500	7,000
Option 2			
Subsidy	3,000	4,500	4,500
Lump Sum	1,500	1,500	2,000
Option 3			
Subsidy	1,750	2,750	2,750
Lump Sum	2,500	3,000	3,500

The subsidy is paid monthly, generally over five years, and into a financial institution loan account. The lump sum is paid with the first monthly payment or, where requested, by early direct payment for deposit assistance or for settlement.

During the five year subsidy period the home must continue to be the applicant's principal place of residence. The subsidy will cease upon the sale of the home, but may recommence if a subsequent home is acquired within 12 months of the sale of the first home.

Details of the First Home Owners Scheme are available in a leaflet which can be obtained through the Department of Housing and Construction or from savings institutions and estate agents.

The following table sets out the operations of the scheme from 1 July 1984 to 30 June 1985.

**FIRST HOME OWNERS SCHEME: OPERATIONS 1984-85**

<i>State</i>	<i>Enquiries</i>	<i>Applications received</i>	<i>Applications approved</i>	<i>Amount of benefit approved</i>	<i>Amount of benefit paid</i>
				(\$'000)	(\$'000)
New South Wales	150,725	23,020	21,400	103,746	67,407
Victoria	184,927	22,718	24,250	113,371	77,920
Queensland	146,193	17,927	16,649	81,689	54,661
Western Australia	121,478	13,112	13,103	64,178	44,868
South Australia	58,581	7,860	7,550	35,590	25,939
Tasmania	26,195	2,821	2,727	13,226	9,789
Northern Territory	5,349	675	696	3,201	2,412
Australian Capital Territory	30,008	2,128	2,158	10,338	6,966
<b>Australia</b>	<b>723,456</b>	<b>90,261</b>	<b>88,533</b>	<b>425,339</b>	<b>289,962</b>

**1984 Commonwealth State Housing Agreement (CSHA)**

The 1984 CSHA came into operation on 1 July 1984 following the renegotiation of the 1981 Agreement. The Agreement is set to run for a 10 year period with triennial reviews. Financial assistance under the 1984 Agreement is to be provided as a combination of grants and loans with at least 75 per cent to be provided as grants. In 1984-85 and 1985-86 all assistance was provided as grants. Each State decides on the distribution of untied funds between home purchase and rental housing assistance and is required to match these funds on a \$1 for \$1 basis with funds provided from their own resources.

The Commonwealth guaranteed a minimum level of funding of \$530 million in 1984-85 and \$510 million for 1985-86 and 1986-87. Total funding each year is determined in the

**Budget Context.** Total funding under the 1984 CSHA in 1985-86 is \$654.4 million, comprising \$517.7 million in 'untied' grants, \$36.6 million for pensioners, \$54.3 million for Aborigines, \$22.7 million for the Mortgage and Rent Relief Scheme, \$13.2 million for the Crisis Accommodation Program and \$10 million for the Local Government and Community Housing Program.

In addition to direct CSHA funding, since 1982-83 the States and the Northern Territory have been able to nominate further funds for public housing from their loan council allocations. A total of \$405.7 million was nominated by the States in 1984-85 and in 1985-86 the States and the Northern Territory are entitled to nominate up to a maximum of \$492 million. These additional funds are provided, subject to States matching the untied funds (\$517 million in 1985-86), and are made available at the highly concessional interest rate of 4.5 per cent per annum over a 53 year period.

The Federal Government is continuing to implement the major principles incorporated in the 1984 CSHA which focus on alleviating housing related poverty and the equitable distribution of housing assistance between tenures.

### Home Purchase Assistance

Funds available under the CSHA for Home Purchase Assistance comprise Commonwealth funds, revolving funds arising from the operation of previous home purchase programs and State funds. These funds are used principally to make loans to cooperative housing societies and approved State lending authorities for on-lending to home purchasers. Under the 1984 CSHA the annual interest rate charged by a State to societies and approved lending authorities is to be determined periodically by the Commonwealth and State Ministers with regard to the minimum Commonwealth Savings Bank market rate for housing loans. Eligibility conditions are set by each State, but loans can only be made to those who cannot obtain mortgage finance on the open market, or from other sources. Loan repayments are based on the borrowers' income.

### Rental Housing Assistance

Funds available to the States for the provision of public rental housing include Federal funds, internally generated funds arising from the operation of housing programs, proceeds from the sale of rental housing, and their own contributions. Under the 1984 Agreement each State determines eligibility for rental housing subject only to the condition that all people are eligible for assistance but priority goes to those most in need. As required under the 1984 CSHA State Housing Authorities are in the process of implementing a cost rent formula for setting rents. Cost rents reflect the cost of providing rental housing and over time the cost rent should decrease proportionally relative to market rents as some elements of the cost formula are fixed.

Each State determines its policy on sales of rental dwellings but all sales are to be at market value or replacement cost and on the basis of a cash transaction. The price can be lower if dwellings are sold to non-government bodies which provide public rental housing and if the houses continue to be used in accordance with CSHA provisions. Home purchase assistance funds can be used to finance the purchase of rental dwellings.

#### PUBLIC HOUSING FUNDS: 1983-84

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>W.A.</i>	<i>S.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Total</i>
	(\$'000)							
Commonwealth loans to States for Housing—								
Rental Housing Assistance . . . . .	32,500	36,400	—	7,800	—	5,900	—	82,600
Home Purchase Assistance . . . . .	13,900	—	16,100	5,200	18,800	2,000	7,300	63,300
Commonwealth grants to States for Housing—								
Rental Housing Assistance . . . . .	86,700	68,000	30,100	24,100	35,100	11,000	11,300	266,300
Home Purchase Assistance . . . . .	—	—	—	—	—	3,600	—	3,600
Rental Assistance for Pensioners . . . . .	11,987	7,793	5,598	2,684	2,662	866	500	32,000
Rental Assistance for Aborigines . . . . .	12,345	3,417	10,346	10,017	5,595	696	9,584	52,000
Mortgage and Rent Relief . . . . .	6,980	5,250	1,600	1,770	1,750	560	170	18,080
Crisis Accommodation for Families in Distress Program . . . . .	1,323	996	608	335	331	107	100	3,800
<b>Total . . . . .</b>	<b>165,645</b>	<b>121,856</b>	<b>64,352</b>	<b>51,906</b>	<b>64,238</b>	<b>24,729</b>	<b>28,954</b>	<b>521,680</b>



The aim of the program is to assist Aborigines to gain access to accommodation which suits their needs and capacity to pay. Grants provided do not have to be matched by the States and may be used for purposes including:

- purchase, development and servicing of land for Aboriginal dwellings;
- construction, purchase and leasing of dwellings;
- provision of rental subsidies to Aboriginal private renters.

During the first 5 years 2,761 dwellings have been provided in the six States under this program, this includes the upgrading of existing dwellings.

Aborigines can also be accommodated from funds provided under other programs.

(c) **Mortgage and Rent Relief Scheme**

Under the three-year program which began in 1982-83 the Commonwealth Government announced that it would provide at least \$20 million a year to the States, the Northern Territory and the Australian Capital Territory for the provision of short term assistance to low-income earners experiencing genuine financial difficulty in meeting their mortgage repayments, rent payments or in gaining access to private rental accommodation.

Payment of the grants is conditional upon the States and Territories matching these sums \$1 for \$1.

The financial commitment to this scheme expired on 30 June 1985. Following a review of the scheme in early 1985 the Government decided to continue the scheme into 1985-86.

This program was incorporated, as a specific assistance program, into the 1984 CSHA. States are responsible for the day-to-day administration of the Scheme, including determining eligibility for assistance.

Although funds were allocated to Queensland in 1982-83 the Queensland Government did not elect to join the Scheme until 1983-84.

(d) **Crisis Accommodation Program**

In 1984-85 the Commonwealth introduced a Crisis Accommodation Program to assist families, individuals, youth and women in crisis situations, as well as the chronically homeless. The program replaces the assistance previously provided under the Crisis Accommodation for Families in Distress Program and capital assistance provided under the Homeless Persons Assistance Program.

Capital grants are provided to the States and the Northern Territory to construct, purchase, lease, renovate or convert dwellings for short-term crisis accommodation.

The Crisis Accommodation Program is linked to the Federal Department of Community Services' Supported Accommodation Assistance Program which supplies recurrent funding such as salaries for refuge workers and other crisis accommodation staff.

**Local Government and Community Housing Program**

In 1984-85, the Commonwealth introduced the Local Government and Community Housing Program. Grants are provided to the States and the Northern Territory to assist local governments, community groups and other non-government organisations to purchase, construct, lease or upgrade dwellings for low cost rental housing. The main objectives of the program are to attract local government and community expertise and money to supplement CSHA efforts, broaden the choice of low cost rental housing and involve tenants in the management of their dwellings. Decisions on the broad program for funding are made by the Federal and State Housing Ministers based on advice from State Advisory Committees. Under arrangements applicable to the operation of the Program, States are responsible for the day-to-day administration. Grants under this program are not required to be matched by the States.

**Housing Agreement (Service Personnel)**

Prior to 30 June 1971, housing for service personnel was provided under the terms of the 1956-1966 Housing Agreement which, in the main, was concerned with public housing and which expired on that date. With effect from 1 July 1971, separate agreements have been concluded between the Commonwealth and State Governments to provide for the construction of dwellings for allotment to service personnel and for improvements to existing accommodation occupied by them. Programs are negotiated annually and the full capital cost is made available by the Commonwealth as loans to the States.

In 1984-85 \$6 million was made available for loans to service personnel for the upgrading of existing dwellings.

### Housing Loans Insurance Corporation

The Housing Loans Insurance Corporation is a Government business enterprise which insures lenders (such as building societies, banks etc) against loss on housing and building loans.

The Corporation was originally established by the *Housing Loans Insurance Act 1965*. Subsequent amendments in 1977, 1983 and 1985 have expanded its charter, as outlined below.

The Corporation is now empowered to insure all mortgage secured loans, including loans for owner-occupied and rental housing and loans for non-residential buildings, shops, factories, offices etc. as well as securities traded in the secondary mortgage market.

These insurance services are generally provided by the Corporation on the basis of a one-time premium determined by the amount of the loan and the proportion it bears to valuation. The legislation also includes provision for a Ministerial direction to be issued requiring the Corporation to offer insurance in respect of special classes of loans that would contribute to the Government's overall housing objectives.

From November 1965, when the Corporation commenced operations, until the end of June 1985, 709,000 loans to the value of \$19,000 million had been insured.

### Defence Service Homes

The *Defence Service Homes Act 1918* assists certain former and serving members of the Defence Force to acquire a home on concessional terms.

The Defence Service Homes Corporation is, subject to the directions of the Minister for Veterans' Affairs, responsible for the administration of the Defence Service Homes Act.

Persons eligible for assistance under the Act include members of the Australian forces and nursing services enlisted or appointed for or employed on active service outside Australia or on a ship of war during the 1914-18 and 1939-45 Wars; persons who served in the warlike operations in Korea or Malaya or who have served on 'special service' as defined in the *Repatriation (Special Overseas Service) Act 1962*; and members of the Defence Force who serve on continuous full-time service and national service men whose periods of service ended not earlier than 7 December 1972 and who meet certain prescribed conditions. The categories of eligible persons also include the widows and, in some circumstances, the widowed mothers of eligible persons, and persons domiciled in Australia and employed in certain sea-going service during the 1914-18 and 1939-45 Wars.

During 1984-85 the following loan conditions applied:

Maximum loan	: \$25,000
Interest rates	: 3.75 per cent per annum on the first \$12,000; 7.25 per cent per annum on any excess over \$12,000 up to \$15,000; 10.00 per cent per annum on amount in excess of \$15,000
Maximum repayment period	: The maximum repayment period permitted by the Act is 45 years or, in the case of the widow or widowed mother of an eligible person, 50 years; but, normally, the repayment period is limited to 32 years.

On 14 May 1985 the Treasurer announced the Government's intention to restructure the Defence Service Homes Scheme by inviting financial institutions to cooperate in providing housing loans to eligible persons and to take over the administration of the Scheme.

### Operations under the Defence Service Homes Act

Since the inception of the Defence Service Homes Scheme in 1919, 415,705 loans have been granted to persons eligible for assistance under the Act. All figures shown include homes which were provided originally under the Housing Agreements with the States, and taken over in accordance with those agreements.

The following tables give details of the operations under the Defence Service Homes Act in the year 1984-85. The earliest year for which details are given in the tables is 1979-80; for earlier years see previous issues of the Year Book. The figures shown include operations in the Northern Territory, Norfolk Island and in Papua New Guinea.

## DEFENCE SERVICE HOMES ACT: NUMBER OF LOANS GRANTED

Year	Construction of homes	Purchase of new homes	Purchase of previously occupied homes	Enlargement of existing homes	Total
1979-80	1,734	566	2,846	105	5,251
1980-81	1,927	531	3,332	125	5,915
1981-82	2,694	570	3,818	203	7,285
1982-83	2,345	419	3,568	225	6,557
1983-84	1,998	254	3,058	220	5,530
1984-85	2,201	266	3,226	216	5,909

## DEFENCE SERVICE HOMES ACT: STATE SUMMARY OF OPERATIONS

Year	N.S.W.(a)	Vic.	Qld(b)	S.A.(c)	W.A.	Tas.	A.C.T.	Total
NUMBER OF LOANS GRANTED								
1979-80	1,751	1,111	1,039	450	474	107	319	5,251
1980-81	1,584	1,309	1,287	495	684	138	418	5,915
1981-82	1,569	1,563	2,031	709	806	198	409	7,285
1982-83	1,576	1,484	1,447	687	808	185	370	6,557
1983-84	1,222	1,264	1,215	580	770	177	302	5,530
1984-85	1,372	1,266	1,249	580	944	228	270	5,909

## CAPITAL EXPENDITURE (\$'000)

1979-80	25,035	15,835	15,149	6,235	6,923	1,508	4,740	75,425
1980-81	26,174	22,334	21,128	8,413	12,505	2,396	8,603	101,554
1981-82	34,350	34,710	44,690	15,318	18,537	4,362	9,723	161,690
1982-83	36,677	33,939	34,416	15,500	18,877	4,001	9,067	152,477
1983-84	28,218	29,133	28,321	13,213	18,487	4,078	7,336	128,786
1984-85	31,841	29,169	29,860	13,423	21,821	4,967	6,511	137,562

## LOAN REPAYMENTS (\$'000)

1979-80	33,425	21,865	13,062	7,361	8,359	1,951	(d)	86,023
1980-81	36,290	22,475	14,990	8,144	9,203	1,833	(d)	92,935
1981-82	29,825	22,278	14,915	7,933	8,980	2,013	(d)	85,944
1982-83	27,951	22,084	13,191	8,032	8,017	1,772	(d)	81,047
1983-84	33,837	25,856	16,433	9,936	10,322	2,575	(d)	98,959
1984-85	37,247	29,721	18,224	11,144	12,679	3,202	(d)	112,217

## NUMBER OF LOAN ACCOUNTS AT 30 JUNE

1980	60,839	48,090	25,529	15,600	16,971	4,006	(d)	171,035
1981	58,371	46,591	25,086	15,099	16,510	3,915	(d)	165,572
1982	56,953	45,498	25,254	14,871	16,235	3,876	(d)	162,687
1983	55,949	44,473	25,476	14,649	16,246	3,856	(d)	160,649
1984	54,114	42,738	25,198	14,181	15,990	3,761	(d)	155,982
1985	52,106	40,943	24,873	13,709	15,660	3,694	(d)	150,985

(a) Includes A.C.T. and Norfolk Island (b) Includes Papua New Guinea (c) Includes Northern Territory (d) Included in New South Wales.

## State housing authorities

The following paragraphs describe briefly the organisation of the various State housing authorities and their activities in the fields of home construction and provision of homes on a rental basis *see* pages 416-419, for their financial advances to persons wishing to purchase or build a home. For summarised figures of total government construction of houses and other dwellings, *see* pages 420 and 421.

*New South Wales—The Housing Commission of New South Wales.* The Housing Commission of New South Wales was constituted in 1942, its principal function being the provision of low-cost housing to persons in the lower or moderate income groups.

Advances from the Commonwealth Government have provided most of the Housing Commission's capital funds and by 30 June 1985 had aggregated \$1,308,188,000 of which \$182,274,000 had been repaid. Other net funds of the Commission at 30 June 1985 comprised: repayable advances from the State, \$297,608,000; public loans raised by the Commission, \$47,292,000; grants from the Commonwealth Government, \$560,371,000; grants from the State, \$82,454,000 (including \$10,754,000 from Consolidated Revenue and \$71,700,000 mainly from the proceeds of poker machine taxes); provision for maintenance of properties, \$65,330,000; and accumulated surplus, \$9,715,000. In addition, the Commission owed \$55,376,000 to creditors, mainly for purchase of land and work-in-progress. These funds were represented by fixed assets, \$2,398,874,000 (including \$125,824,000 debtors for purchase of



homes); and current assets, \$58,897,000. In 1984-85, the Commission's income was \$253,455,000 (including rent \$218,820,000 and interest \$22,163,000); expenditure was \$253,474,000 (interest \$69,905,000).

The permanent dwellings provided by the Commission have been erected under the Federal-State Housing Agreements or from State loans and grants. In 1984-85, 3,392 houses and flats were completed for the Housing Commission by private builders on contract to the Commission.

Upon request by other State Departments, the Housing Commission will erect houses for employees of those Departments, the Departments providing the necessary lands and funds. In addition, the Commission erects (with State funds) dwellings for employees of industries connected with decentralisation and development. Specially designed units are erected by the Housing Commission to provide dwellings for elderly persons at rentals within their means. The rents of these units, as at 30 June 1985, were approximately \$17.00 a week for elderly single persons and \$28.40 a week for elderly couples. At 30 June 1985, 12,658 units had been completed.

*Victoria—Ministry of Housing.* The various State Housing Authorities were consolidated under the control of the Ministry of Housing early in 1973. These authorities now include the Director of Housing, the Government Employee Housing Authority and the Co-Operative Housing Registry.

The *Housing Act 1983*, which was proclaimed in December 1983, abolished the Housing Commission and the Home Finance Trust, replacing these by a Body Corporate under the name of the Director of Housing. From 1 January 1984, all assets, rights, liabilities and obligations of the Housing Commission and of the Home Finance Trust were vested in and became due by the Director.

Under the *Housing Act 1983* the aims of the Ministry of Housing are to assist people into satisfactory housing solutions, at a price they can afford to pay, at a standard at least equal to the standard provided by the private sector, and in a socially integrated manner.

The charter of the Ministry of Housing includes a requirement to ensure that every person in Victoria has adequate and appropriate housing at a price within his or her means by encouraging the provision of well maintained public housing of suitable quality and location, the distribution, according to need, of Government Housing financial assistance and the promotion of orderly planning assembly and development of land.

Since the signing of the 1945 Housing Agreement the construction and acquisition of dwellings has been financed jointly by the Commonwealth and State Governments.

As at 30 June 1985 the Ministry of Housing and its predecessors had built or purchased 99,816 dwelling units of which 50,846 have been sold.

Rental charges for the year ended 30 June 1985 were \$147.3 million against which \$47.7 million was allowed in rental rebates to tenants on low incomes including pensioners.

*Queensland—The Queensland Housing Commission.* The Queensland Housing Commission was established in 1945 to assist in meeting the housing shortage. In addition, the Commission was empowered to build houses itself, either for sale or for rental.

During 1984-85 the Commission provided 4,512 dwelling units, bringing the total number under all schemes since the revival of housing construction in 1944-45 to 78,305. Of this number, 49,912 houses, or 63.7 per cent, were for home ownership, and 28,393, or 36.3 per cent, were for rental.

In the field of rental housing the Commission administers and acts as the constructing authority under the Federal-State Housing Agreements and States Grants (Housing) legislation. Operating under the provisions of the *State Housing Act 1945-1984*, the Commission, through its scheme of mortgage finance, makes advances for the construction of dwellings to eligible persons who own a suitable building site or to purchase a house and land package. The number of dwellings completed during 1984-85 under this scheme amounted to 2,807, making a total of 48,355 completions since the inception of the scheme. The Commission also has power to make advances, secured by mortgage, to firms for housing of employees. The Commission has power to sell houses under contract of sale conditions. Contract of sale agreements were made to purchase 106 of the Commission's houses during 1984-85.

*South Australia—The South Australian Housing Trust.* The South Australian Housing Trust was established under the *South Australian Housing Trust Act, 1936*. Under the *Housing Improvement Act, 1940*, the Trust became the housing authority to administer the Act and the Trust's powers were extended. It is also the housing authority for South Australia under the *Housing Assistance Act 1984*.

The primary role of the Trust is to provide housing for those in need and within their capacity to pay.

In fulfilling its primary role, the Trust aims to provide housing which is appropriate for the householders' needs, is of an acceptable and modern standard and is integrated within the surrounding environment.

The Trust makes housing available to those in need, by the construction, purchase or leasing of property which is let to tenants at rents related to cost, with a rent rebate scheme for those with special needs; by the sale of housing, mainly to sitting tenants.

The Trust also provides assistance to tenants renting privately through:

- the administration of the Rent Relief Scheme;
- its management responsibility for the Emergency Housing Office; and
- exercising its responsibilities under the Housing Improvements Act.

It also assists home owners in financial crisis through the Mortgage Relief Scheme.

The Trust has a separate responsibility to government to act as the State's industrial property authority, to provide industrial premises for approved additions to or extensions of industrial facilities within the State.

The Trust also administers the *Rental Purchase Scheme* in conjunction with the State Bank. This Scheme supersedes the *Low Deposit Purchase Scheme* in assisting low income people in purchasing a home through a nominal deposit and low interest loan.

The Trust is encouraging tenant participation in some of its housing estates. During the year several committees were elected and Trust tenants are becoming involved in issues affecting their homes and the broader community.

Other schemes initiated previously gained momentum during the year in assisting those in need. these include:

- Houses provided to voluntary agencies and youth groups for use as youth shelters.
- *The Housing Co-operatives Scheme* under which the Trust subsidises private rental co-operatives.

A total of 102,164 dwellings have been built, purchased or leased by the Trust since 1936.

For further details see the South Australian Year Book.

*Western Australia—State Housing Commission of Western Australia.* The activities of the State Housing Commission extend throughout the whole State. In addition to construction of a variety of dwellings for its own rental and purchase program as determined under the State Housing Act, the Federal State Housing Agreements prior to 30 June 1971, the *States Grants (Housing) Act 1978*, the 1978 Housing Agreement, the 1981 Housing Agreement, and the 1984 Housing Agreement its activities include: construction of houses for other Government Departments (both Commonwealth and State Government, and semi- and local government authorities) in Western Australia; and construction and maintenance of houses for the Government Employees' Housing Authority.

At 30 June 1985, the Commission had provided under all schemes since 30 June 1944 a total of 74,230 units of accommodation throughout the State (including 12,046 units completed under the *Defence Services Homes Act 1918*).

During the twelve months ended 30 June 1985, 2,036 units of accommodation were provided: metropolitan area, 1,151; country, 600; and north of the 26th parallel, 285. A further 753 units were under construction, and 72 units were also in the process of being acquired.

Building societies are a major source of housing finance in Western Australia. At 30 June 1985, it was estimated that the assets of permanent and terminating societies were about \$2,691 million. Currently, 8 permanent and 216 terminating societies are operating. Under the 1984 Housing Agreement with the Commonwealth the State is required to allocate a proportion of the funds the State receives under the Agreement to the Home Purchase Assistance Account. Advances are made from the account to terminating building societies which in turn make loans available to eligible applicants being those persons unable to obtain mortgage finance assistance in the open market or from other sources.

Under the *Housing Loans Guarantee Act, 1957-1973*, the guarantees provided to financial institutions enable loans to be made to lending institutions with full security. The Act enables building societies and other approved bodies to make high ratio advances to families of low and moderate means without additional charge. The interest rate charged to the borrower may not exceed 12.75 per cent reducible. Loans may be made for up to 95 per cent of the value of the house and land. The maximum loan permitted in respect of the metropolitan region south of the 26th parallel is \$44,650. For a new house situated north of the 26th parallel and in the North West or Eastern Land Divisions, the maximum loan is \$76,000 and in the Kimberley Land Division \$78,850.

*Tasmania—Tasmanian Housing Department.* The Housing Department is responsible for administering the portion of the *Homes Act 1935* relating to the acquisition and development of land for housing purposes and the erection of homes for rental and sale to those deemed in need of assistance, and the *Casual Workers and Unemployed Persons Homes Act 1936*.

During 1984-85, dwelling completions numbered 626. The total number of dwellings constructed to 30 June 1985 was 22,706 of which 6,728 have been sold or demolished. Purchased properties numbered 887 making the total dwelling stock 16,865. Of these 12,874 are detached or semi-detached, 2,085 are elderly persons' units, 430 are multi-unit flats, 1,436 are villa units, 29 are moveable units and 11 are neighbourhood houses.

The Department allots dwellings on a rental basis, however during the year a scheme was introduced to enable low income earners to achieve home ownership through a purchase contract. The weekly rental of a house was between \$45.00 and \$65.00 at 30 June 1985. Approximately 68 per cent of tenants are in receipt of a rental rebate. Under current policy, tenants whose income is below the State Minimum Wage would pay 20 per cent of their income as rent. Tenants whose income is above the State Minimum Wage pay between 20 and 25 per cent dependent upon their level of income. The higher the income, the greater the percentage.

### Housing schemes in Australian Territories

*Northern Territory.* In 1946 control of all government-owned residences in the Territory (excluding those belonging to the Defence Services or Commonwealth Railways or attached to post offices) was vested in the Administration. The Northern Territory Housing Commission was established in 1959 and operates under authority of the *Housing Act 1979*. The Commission became autonomous on 1 October 1969 and, in addition to its role of providing residential accommodation to persons of limited means, its functions were broadened as from 1 July 1978 to include the provision of housing for employees of the Northern Territory Government and related authorities and the provision of residential, office, industrial or other accommodation for the Commonwealth and the Territory for public purposes and approved commercial and welfare organisations.

*Australian Capital Territory.* The Commonwealth Government provides houses, flats and aged persons' units for rental to persons on low incomes who live or are employed in the Australian Capital Territory. At 30 June 1985 the Department of Territories controlled 6,871 houses and 3,381 flats (including aged persons' units) for rental purposes. Government rental houses are currently not available for purchase by tenants.

### Summary of rental activities of government authorities

The first of the following two tables shows the revenue from rental for dwellings under control of government housing authorities each year from 1979-80 to 1984-85, and the second shows the number of tenants paying rent for dwellings under control of the government housing authorities at the end of each year 1979-80 to 1984-85.

#### GOVERNMENT HOUSING AUTHORITIES: REVENUE FROM RENTALS

(\$'000)

Year	N.S.W.	Vic.(a)	Qld	S.A.	W.A.(b)	Tas.	N.T.(b)	A.C.T.	Aust.
1979-80 . . . . .	127,584	68,819	42,924	46,775	28,882	16,100	12,115	20,123	363,322
1980-81 . . . . .	143,409	72,122	44,582	52,889	34,585	17,646	15,241	20,497	400,971
1981-82 . . . . .	162,323	82,322	51,112	60,403	36,648	21,557	17,915	22,896	455,176
1982-83 . . . . .	188,317	102,290	55,865	70,243	40,475	25,149	18,712	37,780	540,831
1983-84 . . . . .	200,371	126,452	59,675	78,841	44,108	28,178	19,899	35,794	591,255
1984-85 . . . . .	218,820	96,175	66,946	89,634	45,945	30,386	22,727	28,090	598,723

(a) Prior to 1983-84 figures relate to Housing Commission only and thereafter to the Ministry of Housing. (b) Figures relate to Housing Commission only.

#### GOVERNMENT HOUSING AUTHORITIES: NUMBER OF TENANTS PAYING RENT

Year	N.S.W.	Vic.(a)	Qld	S.A.	W.A.(b)	Tas.(c)	N.T.(c)	A.C.T.(c)	Aust.
1979-80 . . . . .	90,124	40,090	23,063	42,763	25,867	9,258	6,121	10,282	247,568
1980-81 . . . . .	93,178	41,708	23,581	44,603	26,060	9,886	6,635	10,014	255,665
1981-82 . . . . .	95,237	43,900	24,253	46,263	27,707	10,412	6,882	9,495	264,149
1982-83 . . . . .	97,286	45,806	25,421	48,466	28,656	10,996	7,167	9,638	273,436
1983-84 . . . . .	99,979	49,026	26,890	50,914	28,934	11,736	7,376	9,849	284,522
1984-85 . . . . .	100,098	51,642	28,393	53,281	30,178	12,437	7,705	10,005	293,739

(a) Prior to 1983-84 figures relate to Housing Commission only and thereafter to Ministry of Housing. (b) Figures relate to Housing commission only. (c) Number of occupied dwellings at 30 June.

### Advances to home purchasers

Many prospective home purchasers wish to borrow for the purpose of constructing or purchasing their own homes. Usually the loan is covered by way of mortgage of the home to be constructed or bought. Such loans are provided from a number of private sources and from agencies owned or guaranteed by the Commonwealth or State Governments. The information in this section concerns the direct loans made to home purchasers by the more important institutional lenders. Loans to institutions which in turn lend moneys to home purchasers and loans to contract builders, etc. are excluded as far as possible. The loans may be for the construction of new dwellings, the purchase of existing dwellings, for additions, renovations, etc., as first or subsequent mortgages, overdrafts and so on. While figures of all loans to home purchasers are not available, the institutions mentioned account for a significant proportion of total loans. Details of the terms and conditions of lending are given, together with available information on the number and value of loans made.

#### State and Territory authorities and agencies

*New South Wales: State Bank of New South Wales—Sale of Homes Agency.* A Sale of Homes Agency was established in 1954 to arrange for the sale on terms of houses erected by the Housing Commission of New South Wales. Since 30 November 1976, the sale of these homes on a terms basis has not been permitted, although the Agency still acts as agent for the Commission in collecting instalments payable by purchasers of homes sold prior to that date. The Agency's operations began with the sale to selected purchasers of 100 houses made available by the Commission during 1954-55 and 1955-56. The sales were made on the basis of 10 per cent deposit and repayment of the balance over a maximum period of forty years, with interest at 4.5 per cent a year. Total advances under that scheme amounted to \$646,648; at 30 June 1985 the advances outstanding amounted to \$40,924 in respect of 18 houses.

Between 1 July 1956 and 30 November 1976, the Sale of Homes Agency acted as the agent of the Housing Commission in arranging the sale on terms of houses erected under the Federal-State Housing Agreements. The terms of sale provided for a minimum deposit of \$200 and repayment of the balance over a maximum period of forty-five years, with interest rates since the inception of the scheme ranging from 4.25 to 6.75 per cent a year. Advances totalling \$246,802,000 in respect of 29,176 houses were made by the Agency under the 1956, 1961, 1966 and 1973 Agreements and the *States Grants (Housing) Act 1971*. The following table shows the amounts still outstanding at the end of each of the last six financial years.

**STATE BANK OF NEW SOUTH WALES—SALE OF HOMES  
AGENCY ADVANCES FOR HOMES SOLD UNDER THE 1956,  
1961, 1966 AND 1973 FEDERAL-STATE HOUSING  
AGREEMENTS AND THE STATES GRANTS (HOUSING) ACT  
OF 1971**

Year	Number of houses	Advances outstanding at end of year (a)
		(\$'000)
1979-80 . . . . .	15,628	114,112
1980-81 . . . . .	14,517	103,869
1981-82 . . . . .	13,732	96,437
1982-83 . . . . .	13,032	90,123
1983-84 . . . . .	12,240	83,009
1984-85 . . . . .	11,458	76,025

(a) Comprises principal outstanding and loan charges due but not paid.

Prior to 30 November 1976 the Sale of Homes Agency also acted as agent for the Housing Commission in arranging the sale of houses erected by the Commission on applicants' land. Under this scheme persons who had established a housing need could apply to the Commission to have a standard-type dwelling erected on their own land. The houses were sold, at a price equivalent to their capital cost, on the same terms as for houses erected under the 1956 to 1973 Housing Agreements and the *States Grants (Housing) Act 1971*. A total of 769 houses were built under the scheme at an overall cost of \$8,223,000; as at 30 June 1985 there was an outstanding balance of indebtedness of \$2,814,123 on 380 of those houses.

*State Bank of New South Wales—Other loans.* The State Bank of New South Wales provides assistance to individuals for the erection or purchase of homes and for other approved purposes associated with homes. Advances are based on the bank's official valuation of the dwelling. The rate of interest on new long term loans for housing purposes as at September 1985 was 13 per cent per annum.

*Victoria: Ministry of Housing.* To 30 June 1985, 99,816 (1984—97,334) dwelling units had been built or purchased by the Director of Housing and its antecedent authority, the Housing Commission, using funds provided under the Commonwealth—State Housing Agreement, State funds and Ministry funds. Of these dwelling units, a total of 51,605 (1984—51,544) houses have been sold, 29,236 (1984—29,201) in the metropolitan area and 22,369 (1984—22,343) in the country.

The Home Finance Trust, constituted under the *Home Finance Act 1962*, was abolished in 1983, its functions being assumed by the Director of Housing. The number of loans granted by the Director of Housing to 30 June 1985 were 511 direct loans totalling \$19.5 million and 398 Capital Indexed Loans (CAPIL Scheme) totalling \$16.9 million. No second mortgage loans were granted.

A total of 794 Co-operative Housing Society loans amounting to \$28.9 million were also granted.

*Queensland: Queensland Housing Commission.* Loans from the Commonwealth and State Government are the major source of capital funds for the Commission. Under the *State Housing Act 1945-84*, an eligible person who is the owner of a suitable building site may obtain an advance, secured by mortgage on the land, from the Housing Commission for the erection of a dwelling. The Housing Commission also provides mortgage finance for the purchase of homes already built or to be built by private contractors. The Housing Commission has two Home Ownership Schemes. The first, the Interest Subsidy Scheme, provides a non-repayable subsidy to borrowers who cannot afford commercial rates of interest. The other, the commercial scheme, is for those on higher incomes who cannot obtain finance elsewhere.

*Western Australia: State Housing Commission of Western Australia.* In December 1984 the Commission introduced new loan initiatives to assist applicants into home ownership. These schemes are known as First Mortgage, Flexible Deposit, Shared Equity and Senior Citizens Loan Schemes. The interest rate is currently 11.5 per cent and the repayment of the loan is on an income geared basis with an applicant not being expected to pay more than 25 per cent of an assessed family income on repayments. The maximum repayment period is 30 years.

Under these schemes an applicant is able to select the home of his/her choice and either build a new home or purchase an existing home.

The maximum income an applicant can earn varies throughout the State from \$334.50 gross per week in the metropolitan area to \$472.20 in the Kimberleys. This increases by \$5.00 per week for each dependent child in excess of two.

The maximum value house and land is \$40,000 in the metropolitan area with a maximum advance of 95 per cent of the valuation. In the remainder of the State, depending upon the locality, the maximum value house and land varies from \$42,000 to \$80,000, also subject to a 95 per cent maximum advance.

Assistance through Terminating Building Societies is available to acceptable applicants from the Loans Priority List under first mortgage conditions if they are able to meet the eligibility requirements. Funds are not available for second mortgages. The interest rate on advances varies from 6 per cent to 12 per cent depending on family income, and the maximum repayment period is thirty years. The societies are required to accept no less than 3 per cent of the value of the house and land as a cash equity, but a deposit of 5 per cent or greater is sought by the societies. If the amount of finance required is in excess of the combined maximum advance and deposit provided, a second mortgage or personal loan will be required to bridge the gap.

In the metropolitan area, to be eligible for assistance through the societies, applicants' incomes cannot exceed \$260.00 per week, plus \$20.00 per week for each dependent child. The maximum value of house and land is \$40,000 with a maximum advance of 95 per cent of the valuation being obtainable. The remainder of the State is divided into areas in which the income eligibility varies from \$260.00 per week to \$350.000 per week plus \$20.00 per week for each dependent child. The maximum advance in these areas is 95 per cent on the maximum value of house and land which varies from \$40,000 to \$80,000.

(See Savings Banks, page 243 of Year Book No. 61, for activities of the Savings Bank Division of the Rural and Industries Bank of Western Australia.)

*Tasmania: Tasmanian Housing Department.* During the year a home purchase scheme administered by the Housing Department was introduced. The scheme, to enable low income earners achieve home ownership, is based on a purchase contract with repayments being fixed at 25 per cent of the purchaser's income. Interest payments can be deferred where the tenant's income is insufficient to meet all the interest repayments.

No purchase contracts had been completed by 30 June 1985.

*Tasmanian Development Authority.* On 1 March 1984 the Agricultural Bank of Tasmania was absorbed into the newly formed Tasmanian Development Authority. This new Authority is responsible for the administration of funds made under the Home Purchase Assistance section of the *Housing Assistance Act 1978*. A new Housing Agreement operating from 1 July 1978 consolidates all past agreements. The State has also provided State Loan Funds for lending under the Homes Act. Interest rates vary from 6 per cent to 13.5 per cent depending on need. The term varies depending on the applicant's capacity to repay.

During the year the State provided additional funds specifically for the construction of homes at an interest rate of 7 per cent fixed for three years and increasing by 0.5 per cent a year thereafter up to within 1 per cent of the then current Commonwealth Savings Bank interest rate for housing.

Principles which apply under the new agreement include:

- To facilitate home ownership for those able to afford it but not able to gain it through the private market.
- Provide assistance for home ownership in the most efficient way and thus exclude from eligibility those not in need, to minimise continued availability of assistance to those no longer in need and to accord benefits which are designed so that assistance being provided is related to the particular family's or individual's current economic and social circumstances.
- The State is able to exercise maximum autonomy and flexibility in the administrative arrangements necessary to achieve these principles.

The following table shows details for recent years.

AGRICULTURAL BANK, ADVANCES FOR HOUSING (a)

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
Advances approved:						
Number . . . . .	281	386	354	450	624	537
Value (\$'000) . . . . .	6,551	10,129	9,448	12,665	18,030	17,437
Advances outstanding at 30 June (\$'000) . . . . .	52,740	58,250	65,056	71,020	83,081	90,338

(a) Excludes advances to Co-operative Housing Societies.

*Northern Territory: Loans Scheme.* The Northern Territory Government Home Loan Scheme introduced on 1 October 1979 was replaced on 1 September 1984 by the *Northern Territory Home Purchase Assistance Scheme*. The new scheme is based on the principles set out in the Commonwealth State Housing Agreement.

The scheme is based on a maximum loan of \$50,000 to lower income groups. As the gross weekly income of the highest earner increases, the amount of the Commission loan decreases. There is a requirement that a prescribed amount be borrowed from a private lending institution for the higher income group.

Repayments on the loan are based on 20 per cent of gross family income and reviewed annually. Where the repayment is insufficient to cover interest due, the unpaid amount is allowed to accumulate free of additional charges.

The interest rate currently charged is 12.5 per cent and the Commonwealth Savings Bank Home Loan rate will be an indicator for future interest rates.

The maximum term of the loan is 45 years.

To be eligible to apply, applicants must not own a home elsewhere in Australia, have resided in the Territory for the six months prior to application and property value must not exceed \$100,000.00. Loans can be on a first or second mortgage basis.

*Sales Schemes.* Two schemes exist to allow eligible tenants of Northern Territory Housing Commission dwellings to purchase. Under the *General Public Sales Scheme*, sales are on a cash basis only to approved tenants. A *Staff Sales Scheme* also operates to allow tenants of Northern Territory Public Service dwellings to purchase. Sales are for cash or on terms

requiring a minimum deposit of 5 per cent of the purchase price with repayments over a maximum period of 45 years including interest at either 7.0 per cent or 10.0 per cent subject to a means test. A requirement of two years satisfactory tenancy, which existed until July 1982, no longer applies.

*Australian Capital Territory:* The Commissioner for Housing operates an income-g geared loan scheme to assist people who are generally unable to afford finance in the private market. Loans to a maximum of \$60,000 over a maximum term of thirty years are available for the purchase or erection of dwellings in the Australian Capital Territory. The exact amount of loan granted and term of the loan are determined by the applicant's level of income and assets and the value of the property to be purchased. To qualify for a loan an applicant must:

- have lived or worked in the Australian Capital Territory for at least six months prior to loan approval;
- have attained the age of 18 years;
- have a total gross household income not exceeding \$450.00 per week plus \$15.00 per week for each dependent child;
- be unable to obtain sufficient housing finance from private sources;
- not have any interest whatsoever in real property located in the A.C.T. or Queanbeyan other than the dwelling or the land upon which it is proposed to erect the dwelling;
- undertake to dispose of any other real property within a period of six months after assistance is granted under this scheme;
- not previously have received government financial assistance in the form of a loan for the purchase or construction of a dwelling in the A.C.T. or Queanbeyan; and
- demonstrate a capacity to afford the initial and subsequent commitments for purchase of a property.

Applicants who do not satisfy one or more of the above conditions may still be granted assistance if in the opinion of the Commissioner for Housing the applicant is in need of assistance and the objective of the scheme would be satisfied by providing that assistance; similarly a loan to an applicant who meets all of the above conditions will not be approved if the Commissioner for Housing considers the form of assistance is not needed by the applicant.

Interest rates are variable between 5.75 per cent and 11.5 per cent. The precise rate is geared to the applicant committing 25 per cent of income to total mortgage payments. At 30 June 1985 10,032 properties were under mortgage to the Commissioner for Housing.

#### **Savings banks, trading banks, life insurance companies and registered building societies**

For information on loans approved to individuals for owner occupied housing *see* Chapter 21, Private Finance.

## **CONSTRUCTION**

### **Building**

Building activity is a significant indicator of the level of economic activity. In addition, the level of building activity and the types of buildings being constructed affect the Australian physical and social environment. Building approvals statistics give an indication of the potential future level of investment of private individuals, companies and government agencies in approved building construction. Building activity statistics show the level of actual building construction activity in terms of the level of commencements and completions, building jobs under construction and the value of work done and yet to be done on building jobs.

From July 1985, there has been a change in terminology used by the ABS in presenting building statistics. The terms 'residential buildings' and 'non-residential building' have replaced 'dwellings' and 'other building' respectively and 'other residential buildings' replaces 'other dwellings'. It should be noted that these are only changes in terminology and do not affect the classification of the various types of buildings nor the statistics. The concept of a 'dwelling unit' remains unchanged.

The building statistical collections cover all new residential building of any value, new non-residential building jobs valued at \$10,000 and over, and alterations and additions (to both residential and non-residential building) valued at \$10,000 and over. From 1966-67 to 1972-73, alterations and additions of \$10,000 and over were included with new residential building and new non-residential building. From 1973-74, alterations and additions (of

\$10,000 and over) to new residential building are shown separately, but for non-residential building, new work and alterations and additions continue to be shown combined.

From the September quarter 1980 a new Building Activity Survey replaced the previous quarterly Building Operations Census. The major features of the new survey are as follows:

- replacement of the previous complete enumeration of private sector jobs involving new house construction or alterations and additions valued at \$10,000 or more to houses by a sample survey; and
- continuation of the complete quarterly enumeration of jobs involving construction of new residential buildings other than private sector houses, construction of new non-residential buildings with an approval value of \$10,000 or more and all alterations and additions with an approval value of \$10,000 or more to buildings other than private sector houses.

From the September quarter 1981 two additional changes were introduced:

- a one-month-lagged framework of approvals is now used as the basis for selection of both house and non-house building jobs (previously only private sector house jobs were selected from a one-month-lagged approvals framework); and
- in general, a building job is now considered to have commenced, for the purposes of the statistical collection, only when the value of work done on that job as reported by the builder is equal to or greater than a pre-determined (threshold) value.

### Number of new houses

The following table provides a summary of the number of new houses approved, commenced, under construction and completed by type of ownership in each State and Territory for the year 1984-85. The following graph shows these details over an eight-year period.

NUMBER OF NEW HOUSES 1984-85

('000)

	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Private Sector—</b>									
Approved . . . . .	29.2	31.2	24.1	8.7	13.9	2.9	0.9	2.5	113.5
Commenced . . . . .	27.6	30.5	23.2	8.5	13.4	2.6	0.8	2.3	109.1
Under construction(a) . . . . .	14.0	15.7	5.0	2.6	4.0	1.4	0.4	1.2	44.2
Completed . . . . .	25.6	27.8	24.2	8.5	13.1	2.4	0.8	1.6	104.1
<b>Public Sector—</b>									
Approved . . . . .	1.8	2.5	0.8	1.2	0.9	0.5	0.7	0.6	9.0
Commenced . . . . .	1.9	2.2	0.7	1.1	0.9	0.5	0.7	0.5	8.5
Under construction(a) . . . . .	1.4	1.0	0.1	0.6	0.2	0.2	0.7	0.5	4.8
Completed . . . . .	1.6	1.8	1.0	1.0	0.8	0.4	0.7	0.3	7.5
<b>Total—</b>									
Approved . . . . .	31.0	33.7	24.9	9.9	14.9	3.4	1.6	3.1	122.5
Commenced . . . . .	29.5	32.7	24.0	9.6	14.3	3.1	1.6	2.8	117.5
Under construction(a) . . . . .	15.4	16.7	5.1	3.2	4.3	1.6	1.1	1.7	49.0
Completed . . . . .	27.1	29.6	25.2	9.5	14.0	2.8	1.4	1.9	111.6

(a) At end of period

### Number of new houses approved, by material of outer walls

The use of certain materials for outer walls is dictated by such factors as cost, durability, appearance and climatic conditions. Changes in the materials used over time indicate changes in the characteristics of the housing stock.

The following table shows the number of new houses approved in each State and Territory during the year 1984-85, classified according to the material of their outer walls.

NUMBER OF NEW HOUSES APPROVED BY MATERIAL OF OUTER WALLS, 1984-85

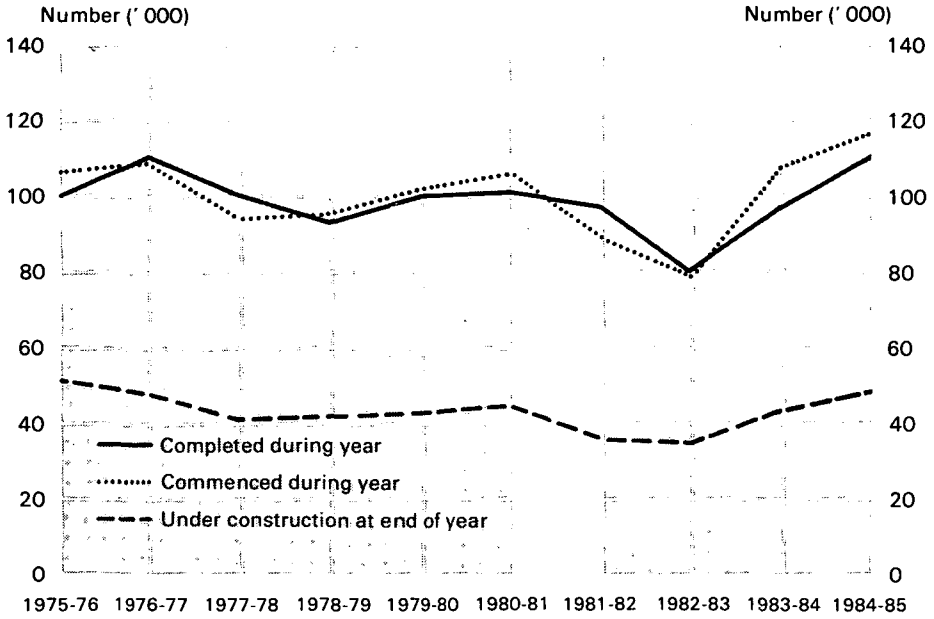
('000)

Material of outer wall	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Double brick(a) . . . . .	2.0	0.9	2.3	1.3	13.0	0.3	0.4	—	20.2
Brick veneer . . . . .	24.6	23.7	16.6	6.3	0.9	2.5	0.9	2.5	78.0
Timber . . . . .	2.1	2.9	2.1	0.2	0.2	0.4	0.1	—	8.0
Fibre cement . . . . .	2.0	1.3	3.7	1.0	0.7	0.1	0.1	—	8.8
Other . . . . .	0.3	0.5	0.3	0.1	0.1	0.1	0.1	—	1.5
Not stated . . . . .	—	4.3	—	1.0	—	—	0.1	0.6	6.0
<b>Total . . . . .</b>	<b>31.0</b>	<b>33.7</b>	<b>24.9</b>	<b>9.9</b>	<b>14.9</b>	<b>3.4</b>	<b>1.6</b>	<b>3.1</b>	<b>122.5</b>

(a) Includes houses constructed with outer walls of stone or concrete.



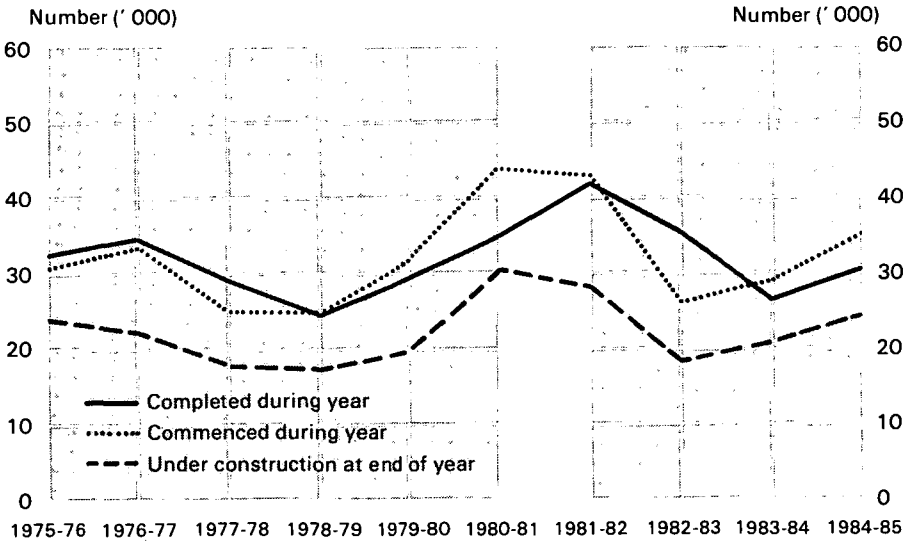
**NEW HOUSES: AUSTRALIA, 1975-76 TO 1984-85**



Note: Break in series from 1980-81 and 1981-82.

**PLATE 40**

**DWELLING UNITS IN NEW OTHER RESIDENTIAL BUILDING: AUSTRALIA, 1975-76 TO 1984-85**



Note: Break in series from 1980-81 and 1981-82.

**PLATE 41**

**Number of dwelling units in new other residential building**

The level of other residential building construction is highly variable and does not follow the traditionally regular pattern experienced in house construction. This can be explained partly by the generally larger size of other residential building construction jobs and also by the extent of speculative building of private flats, home units and similar other residential building projects. Although construction of government-owned other residential buildings is substantial, the proportion of government-owned other residential buildings to total other residential buildings constructed is smaller than that of government-owned houses to total houses.

The following table shows the number of new dwelling units in other residential building approved, commenced, under construction and completed by type of ownership in each State and Territory for the year 1984-85. For a graph showing these details over an eight year period, see page 454.

**NUMBER OF DWELLING UNITS IN NEW OTHER RESIDENTIAL BUILDING, 1984-85**  
(\*000)

	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Private Sector—</b>									
Approved . . . . .	8.6	6.9	6.1	3.7	3.7	0.8	1.0	0.4	31.1
Commenced . . . . .	7.4	7.2	5.5	3.2	3.3	0.7	0.9	0.6	28.7
Under construction(a) . . . . .	6.7	5.3	2.7	1.9	1.7	0.3	0.4	0.5	19.4
Completed . . . . .	6.1	5.5	5.5	2.6	3.0	0.6	0.8	0.6	24.8
<b>Public Sector—</b>									
Approved . . . . .	2.8	0.4	0.8	1.4	0.8	0.2	0.3	0.1	6.8
Commenced . . . . .	2.6	0.5	0.7	1.3	0.8	0.2	0.3	—	6.4
Under construction(a) . . . . .	2.5	0.4	0.3	1.2	0.2	0.1	0.4	—	5.2
Completed . . . . .	2.4	0.3	0.7	1.1	0.8	0.3	0.2	—	5.7
<b>Total—</b>									
Approved . . . . .	11.4	7.3	6.9	5.1	4.4	1.0	1.3	0.5	37.9
Commenced . . . . .	10.0	7.6	6.1	4.6	4.0	0.9	1.2	0.6	35.1
Under construction(a) . . . . .	9.2	5.8	3.0	3.1	1.9	0.3	0.8	0.5	24.6
Completed . . . . .	8.5	5.8	6.2	3.7	3.7	0.9	1.0	0.6	30.5

(a) At end of period.

**Value of buildings**

The following table shows the value of all buildings approved, commenced, under construction, completed, work done and work yet to be done in Australia for the year 1984-85, according to the class of building. The classification of other building by type of building is according to the function a building is intended to serve as specified on building authorisations.

**VALUE BY CLASS OF BUILDING, 1984-85**  
(\$ million)

Class of building	Approved	Commenced	Under construction (a)	Completed	Work done (b)	Work yet to be done (a)
New houses . . . . .	6,027.4	5,923.2	2,779.4	5,390.7	5,662.6	1,392.1
New other residential buildings . . . . .	1,486.9	1,468.8	1,246.0	1,254.3	1,399.6	616.0
<i>Total new residential building</i>	7,514.3	7,392.0	4,025.4	6,644.9	7,062.2	2,008.0
<i>Alterations and additions to residential buildings (c) . . . . .</i>	891.7	876.6	369.7	814.4	842.6	184.8
Hotels, etc. . . . .	716.7	543.2	813.2	332.6	447.9	433.3
Shops . . . . .	1,010.8	960.6	693.1	819.1	865.9	383.0
Factories . . . . .	547.3	566.9	572.4	701.6	582.7	210.5
Offices . . . . .	1,905.4	2,081.5	2,828.9	1,174.1	1,754.1	1,574.7
Other business premises . . . . .	622.5	616.3	462.5	603.3	649.1	216.0
Educational . . . . .	743.9	727.2	782.5	511.0	652.1	416.7
Religious . . . . .	44.0	45.5	31.2	35.1	39.5	16.6
Health . . . . .	366.0	358.8	620.7	229.4	362.6	260.7
Entertainment and recreational. . . . .	369.0	364.6	370.7	453.6	339.1	195.4
Miscellaneous . . . . .	328.8	298.8	904.3	248.9	426.3	422.0
<i>Total non-residential building</i>	6,654.4	6,563.4	8,079.7	5,108.6	6,119.3	4,129.0
<b>Total building</b>	<b>15,060.5</b>	<b>14,831.9</b>	<b>12,474.7</b>	<b>12,567.9</b>	<b>14,024.1</b>	<b>6,321.8</b>

(a) At end of period. (b) During period. (c) Valued at \$10,000 or more.

### **Building Research Activity**

The CSIRO Division of Building Research is the main, and largest, centre of building research in Australia, with a total staff of some 200, about 80 of whom have professional qualifications through all the conventional sciences, social sciences and economics. The work of the Division covers all aspects of building design, maintenance, construction, and planning.

The work is carried on in four programs, namely: Design for Durability, Life Cycle Performance, Safety & Risk, and Shelter & Infrastructure. Within these programs, the work is further subdivided into projects of which there are a total of 37. It should be noted that as a result of cutbacks in finance and resources over the last ten years, the Division no longer works in production of building materials, but still maintains an active concern for the properties and performance of building materials. In keeping with the policy of CSIRO, all the research is strategic mission-oriented with a time-scale for the individual projects of three to five years.

The Division has always given major emphasis to dissemination of the results of its work, not only through conventional research channels of publication, but to industry and as far as its resources allow, to the general public. Thus, as well as the expected form of research papers of which about 120 are produced annually in journals around the world, the Division also publishes a bi-monthly newsletter 'ReBuild', which with a mailing list of some 10,000, has the widest distribution of any building publication in Australia. This newsletter is particularly intended to interpret the results of the Division's activities in terms which make them of use to members of the industry and to all other interested parties. The Division also publishes annually a volume entitled 'Research Papers', which includes summaries and abstracts of all journal articles written by members of the Division's staff and published throughout the world, in the previous 12 months. This is a very effective means of current awareness information and brings to people's notice the extent of the Division's activities and a quick summary of the results achieved. The Program of Research is also distributed annually to senior members of the building industry, members of advisory committees, and so on. It is available to others on request.

Some years ago, the Division introduced an automatic tape answering service in an endeavour to meet the vast number of inquirers from the general public. Some 12 tapes are operating continuously to provide 3-minute introductory responses to inquirers on a selected number of subjects, which have been found to be the most common queries. In an endeavour to develop further the contact with industry and to make as many people as possible aware of the work of the Division, a recent new initiative has been the production of a number of videos of approximately 10-minute length, dealing with such subjects as productivity in maintenance and repairs, bushfire construction, water penetration of buildings, and corrosion of reinforced concrete. These videos are available on loan, and in the two years that they have been available, it is estimated that the total audience which they have reached is 8,000.

Formal contact with industry is maintained through a large number of advisory committees, but the most important function which these serve is to seed a very much greater number of informal contacts through which the officers of the Division are kept aware of the problems and needs of industry for research. The main advisory groups are those associated with each of the four programs listed above, but there is also a Building Research Committee, which consists of the Heads of a number of Commonwealth Government research organizations, and a Building Research and Development Advisory Committee. There are also Steering Committees associated with any major sponsorship by industry.

The Division has now been in existence over 40 years, and the nature of its work has changed considerably with time, as the building industry itself has changed. Two main themes dominate the existing programs and these are:

- Information technology.
- Deterioration and restoration of the infrastructure.

Information technology is very much concerned with the development and use of computer software to aid all parties in the building industry, and the effort is now centred entirely on the use of microcomputers. It has also been strongly oriented towards the needs of local government, in respect of their role in the control of building design and construction, and aspects of building and community planning.

Both in the U.S.A. and U.K., the deterioration of the infrastructure, i.e. roads, bridges, public buildings, drains, sewers, etc. has become a major national concern, and is considered to be having a significantly adverse effect on the general standard of living and the performance of industry. The concern here is to ensure that such a situation does not arise

in Australia, and that therefore to endeavour to see that adequate consideration is given to maintenance, both in financial and technical terms.

Another major aspect of the Division's work is the input made by members of the staff to documents produced by the Standards Association of Australia, building regulations, and similar authoritative publications. All operations throughout the planning, design, construction, and maintenance of buildings and other structures are constrained by standards or regulations produced by government authorities or incorporated in the contracts between the parties to any construction. Staff of the Division participate in 100 committees, subcommittees, and boards of the Standards Association of Australia, and contribute expertise to the production of standards on all building materials and products, and codes of practice for the use of these materials. As examples, it may be quoted that the size of any timber member used in house construction in Australia is obtained from standards, which are based directly on the research done by the Division of Building Research. Similarly the design for house footings and slab-on-ground concrete floors are based directly on the results of research from the Division. These results have now been incorporated into building regulations in various states.

The studies of the productivity of the house building industry in Australia some years ago, showed that in fact Australian house builders were at least as productive, if not more so, in terms of man-hours/m<sup>2</sup> than anywhere else in the world. This achievement in part explains the failure in Australia of most attempts at industrialization or prefabrication at the house building level.

In recent years, the Division has, with significant sponsorship from industry, made an extensive study of the thermal performance of all types of Australian house construction, and an industry group has used the results of this research to establish a 'Five Star Design Rating' for advanced thermally efficient houses.

### Construction (Other Than Building)

These statistics relate to work by private contractors on construction (other than building) prime contracts valued at \$100,000 or more, inclusive of all associated sub-contract work performed for the prime contractor. Alterations and additions undertaken as prime contracts valued at \$100,000 or more are included in the statistics. Repairs and maintenance contracts, construction undertaken by government authorities involving their own work forces, and construction on their own account by enterprises in the private sector, are excluded.

The construction (other than building) classification is broadly compatible with that used for the publication of data from the 1978-79 Construction Industry Survey.

The following table shows the value of construction (other than building) activity undertaken as prime contracts commenced, under construction, completed, work done and work yet to be done in Australia for the year 1984-85.

VALUE OF CONSTRUCTION (OTHER THAN BUILDING) PRIME CONTRACTS BY OWNERSHIP,  
1984-85  
(\$ million)

	Commenced	Under construction (a)	Completed	Work done (b)	Work yet to be done (a)
<b>PRIVATE SECTOR</b>					
Roadwork . . . . .	346.0	203.4	333.6	356.3	88.3
Dams, water supply and distribution, sewerage and drainage . . . . .	29.9	7.5	27.4	28.6	4.2
Electrical power transmission, heavy electrical generating plant . . . . .	34.6	29.8	45.9	40.6	6.5
Harbours . . . . .	62.4	66.7	9.6	42.3	9.7
Other heavy industrial plant etc. . . . .	313.5	473.5	1,106.4	388.7	267.0
Other (c) . . . . .	184.2	227.5	186.1	209.7	95.9
<i>Total</i> . . . . .	<i>970.6</i>	<i>1,008.4</i>	<i>1,709.1</i>	<i>1,066.2</i>	<i>471.7</i>

**VALUE OF CONSTRUCTION (OTHER THAN BUILDING) PRIME CONTRACTS BY OWNERSHIP,  
1984-85 (continued)**  
(\$ million)

	Commenced	Under construc- tion (a)	Completed	Work done (b)	Work yet to be done (a)
<b>PUBLIC SECTOR</b>					
Roadwork . . . . .	547.9	532.5	515.6	567.7	264.4
Dams, water supply and distribution, sewerage and drainage . . . . .	186.0	259.6	365.8	239.5	138.9
Electrical power transmission, heavy electrical generating plant . . . . .	156.6	2,879.6	848.8	799.2	803.9
Harbours . . . . .	25.0	49.7	30.0	48.5	19.6
Other heavy industrial plant etc. . . . .	121.1	519.0	174.7	233.1	130.2
Other (c) . . . . .	481.6	887.4	1,162.1	648.0	336.8
<i>Total.</i> . . . . .	<i>1,518.2</i>	<i>5,127.9</i>	<i>3,097.0</i>	<i>2,536.1</i>	<i>1,693.8</i>
<b>TOTAL</b>					
Roadwork . . . . .	894.0	735.9	849.3	924.0	352.7
Dams, water supply and distribution, sewerage and drainage . . . . .	215.8	267.1	393.2	268.0	143.1
Electrical power transmission, heavy electrical generating plant . . . . .	191.2	2,909.4	894.7	839.9	810.4
Harbours . . . . .	87.4	116.4	39.7	90.8	29.2
Other heavy industrial plant etc. . . . .	434.6	992.5	1,281.1	621.8	397.2
Other (c) . . . . .	665.8	1,114.9	1,348.2	857.7	432.7
<b>Total.</b> . . . . .	<b>2,488.8</b>	<b>6,136.3</b>	<b>4,806.1</b>	<b>3,602.3</b>	<b>2,165.5</b>

(a) At end of period. (b) During period. (c) Comprises bridges, railways, pipelines, street and highway lighting, telecommunications and miscellaneous.

### Construction Industry Survey

This section contains statistics obtained from a sample survey of private sector construction establishments and of public sector enterprises engaged in construction activity, conducted in respect of 1978-79. This was the first time the ABS obtained comprehensive information about the private sector construction industry, or of construction activity of the public sector.

The survey was undertaken in response to requests from both private and government organisations for such data about the construction industry. The private sector collection was conducted as a component of the ABS's integrated economic statistics system. This system has been developed so that data from each industry sector conform to the same basic conceptual standards, thereby allowing comparative analysis across different industry sectors. The results of this survey are therefore comparable with economic censuses undertaken annually for the mining, manufacturing and electricity and gas industries and periodically for the wholesale, retail and selected service industries.

A second collection of private sector construction establishments and public sector enterprises engaged in construction activity is being conducted in respect of 1984-85. This collection will produce similar types of statistics to the 1978-79 results but with more detail collected on construction employment and commodity areas. Results are expected to become available from July 1986.

#### Private Sector Construction Industry Statistics

The collection has provided detailed information on employment, wages, operating expenses, turnover, value added, capital expenditure, and on the structure and size of establishments in the private sector construction industry. The following tables show for private sector construction establishments, summary statistics relating to their operations; and statistics on the value of construction work done, by industry class and broad commodity group, for 1978-79. Further detailed statistics are contained in ABS statistical publications: *Private Sector Construction Establishments, Details of Operations by Industry Class, Australia, (1978-79)* (8714.0); *Private Sector Construction Establishments, Details of Operations by Industry Class, States and Territories, 1978-79* (8715.0-8722.0).

### Public Sector Construction Activity Statistics

Theoretically the same conceptual framework applies to both the public and private sectors, i.e. preferably all public sector establishments and ancillary units classified to the industries in Division E (Construction) of the Australian Standard Industrial Classification (ASIC) should have been included in the scope of the Survey. However, at the time the survey was conducted, appropriate definitions of public sector establishments and ancillary units had not been developed, because of widely divergent accounting systems within the public sector.

The public sector collection therefore measured the significance of construction activity undertaken by public sector enterprises using their own workforces. It provided information on direct expenses, payments to contractors, and employment associated with new construction and major alterations and additions. Because of the different concepts used in the collection of these data, the public sector results cannot be validly aggregated with those for the private sector. The following table shows construction expenditure of public sector enterprises by type of construction activity and level of government, for 1978-79. Further detailed statistics are contained in ABS publication: *Construction Activity in the Public Sector, Australia, 1978-79* (8712.0).

### Enterprise and Industry Concentration Statistics

Industry statistics shown earlier relate to establishments. Statistics are also available for enterprises engaged in the construction industry. These have been published in the publication: *Enterprise Statistics, Details by Industry Class, Australia, 1978-79* (8103.0).

Similarly, industry concentration statistics have been published for 1978-79. These aim to show the extent to which a few enterprise groups predominate in the construction industries, and are available in the publication: *Construction Industry Survey, Industry Concentration Statistics, Private Sector, Australia, 1978-79* (8723.0). There will be no industry concentration statistics published for 1984-85.

### PRIVATE SECTOR CONSTRUCTION ESTABLISHMENTS—VALUE OF CONSTRUCTION WORK DONE BY INDUSTRY CLASS BY BROAD COMMODITY, AUSTRALIA, 1978-79

(\$'000)

Industry	Building					Total non-building Demolition	Total construction work done
	Houses	Other residential buildings	Non-residential buildings	Total buildings	Total building		
Total Building Construction (411)	2,540,254	536,414	2,799,341	5,876,008	66,732	880	5,943,621
Total Non-building Construction (412)	10,034	2,588	36,024	48,645	2,031,479	199	2,080,323
Total General Construction (41)	2,550,287	539,002	2,835,365	5,924,654	2,098,211	1,079	8,023,944
Concreting (4231)	93,208	32,649	129,723	255,580	70,620	4	326,203
Bricklaying (4232)	76,310	12,881	38,590	127,779	4,279	13	132,071
Roof Tiling (4233)	60,677	3,464	5,739	71,681	26	-	71,707
Floor & Wall Tiling (4234)	28,185	3,313	12,766	44,263	875	-	45,138
Structural Steel Erection (4241)	2,831	582	53,537	56,949	44,947	183	102,080
Plumbing (4242)	314,717	52,327	244,463	611,507	30,613	-	642,120
Electrical Work (4243)	141,611	23,275	376,545	541,429	112,199	-	653,628
Heating and Air Conditioning (4244)	34,600	3,567	315,102	353,270	4,271	-	357,540
Plastering and Plaster Fixing (4245)	98,676	14,250	66,600	179,527	400	-	179,927
Carpentry (4246)	54,816	8,009	70,353	133,180	3,861	8	137,048
Painting (4247)	134,505	20,617	97,542	252,664	19,282	-	271,945
Earthmoving and Dredging (4248)	29,176	3,862	40,917	73,956	269,406	726	344,088
Special Trades n.e.c. (4249)	81,018	6,939	199,296	287,254	105,625	9,673	402,552
Total Special Trade Construction (42)	1,150,330	185,736	1,652,972	2,989,038	666,403	10,608	3,666,049
Total Construction (41-42)	3,700,617	724,737	4,488,337	8,913,692	2,764,614	11,687	11,689,992

## PRIVATE SECTOR CONSTRUCTION ESTABLISHMENTS—SUMMARY OF OPERATIONS BY INDUSTRY CLASS, AUSTRALIA, 1978-79

ASIC Code	Industry class	Establishments operating at 30 June	Average employment over whole year			Wages and Salaries	Turnover	Stocks		Total purchases, transfers in and selected expenses	Value added	Fixed capital, expenditure less disposals
			Males	Females	Persons			Opening	Closing			
		(No.)	(No.)	(No.)	(No.)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)
4111	House construction . . . . .	13,347	28,898	10,597	39,495	197,127	2,576,494	385,757	445,478	2,004,902	631,313	36,216
4112	Residential building construction, n.e.c. . . . .	1,217	3,353	964	4,317	32,647	421,812	122,583	165,828	369,551	95,506	11,292
4113	Non-residential building construction . . . . .	2,719	31,618	3,361	34,978	404,674	2,917,730	127,773	127,996	2,271,577	646,376	23,486
411	Total building construction . . . . .	17,283	63,868	14,922	78,790	634,448	5,916,037	636,113	739,302	4,646,031	1,373,195	70,994
4121	Road and bridge construction . . . . .	592	10,023	714	10,737	136,025	671,666	25,506	27,924	439,091	234,993	20,082
4122	Non-building construction, n.e.c. . . . .	1,310	23,389	1,929	25,318	355,490	1,469,844	51,088	72,065	912,560	578,261	52,497
412	Total non-building construction . . . . .	1,903	33,412	2,643	36,054	491,515	2,141,510	76,595	99,990	1,351,651	813,254	72,579
41	Total general construction . . . . .	19,186	97,280	17,564	114,844	1,125,963	8,057,546	712,708	839,292	5,997,682	2,186,448	143,573
4231	Concreting . . . . .	2,040	7,548	1,661	9,208	68,807	327,936	7,361	8,023	194,098	134,500	4,333
4232	Bricklaying . . . . .	3,386	7,295	1,732	9,027	33,004	132,478	3,260	3,154	51,390	80,983	1,988
4233	Roof tiling . . . . .	499	1,550	386	1,937	11,817	72,340	2,629	3,436	47,235	25,912	529
4234	Floor and wall tiling . . . . .	1,055	1,629	722	2,351	5,827	46,326	1,677	1,981	25,517	21,112	881
4241	Structural steel erection . . . . .	311	2,916	265	3,180	37,676	103,631	3,601	5,273	46,534	58,769	3,061
4242	Plumbing . . . . .	6,267	19,012	5,051	24,062	151,529	651,007	30,177	34,951	360,405	295,376	9,514
4243	Electrical work . . . . .	4,420	20,781	4,046	24,827	205,439	682,940	37,169	39,192	359,486	325,478	8,957
4244	Heating and air-conditioning . . . . .	599	7,131	863	7,994	84,683	368,708	16,652	18,075	243,491	126,641	3,655
4245	Plastering and plaster fixing . . . . .	1,484	4,965	1,080	6,046	38,972	188,092	6,806	7,321	112,597	76,010	2,063
4246	Carpentry . . . . .	2,362	5,348	1,303	6,650	36,778	137,076	4,461	5,132	64,154	73,593	2,887
4247	Painting . . . . .	5,280	12,100	2,946	15,045	74,338	273,803	6,608	8,113	108,382	166,926	4,393
4248	Earthmoving and dredging . . . . .	1,874	7,721	1,555	9,277	82,019	356,759	13,913	15,156	186,576	171,426	24,359
4249	Special trades, n.e.c. . . . .	2,588	9,849	2,212	12,061	92,423	422,456	20,753	22,833	242,602	181,934	8,899
42	Total special trade construction . . . . .	32,165	107,845	23,821	131,666	923,312	3,763,552	155,066	172,640	2,042,467	1,738,660	75,519
41-42	Total construction . . . . .	51,351	205,125	41,385	246,510	2,049,275	11,821,098	867,773	1,011,931	8,040,149	3,925,108	219,093

**PUBLIC SECTOR ENTERPRISES—CONSTRUCTION EXPENDITURE BY TYPE OF CONSTRUCTION  
ACTIVITY AND LEVEL OF GOVERNMENT, AUSTRALIA AND STATE, 1978-79  
(\$'000)**

<i>Type of Government</i>	<i>Building</i>					<i>Total Non-building</i>	<i>Demolition</i>	<i>Total value of expenditure on construction activity</i>
	<i>Houses</i>	<i>Other residential buildings</i>	<i>Non-residential buildings</i>	<i>Total building</i>				
Commonwealth Government . . . . .	11,672	1,948	234,331	247,952	676,372	np	np	
State Government . . . . .	163,605	34,276	630,385	828,266	997,749	np	np	
Local Government . . . . .	4,727	3,022	123,672	131,420	781,882	np	np	
<b>Total Australia . . . . .</b>	<b>180,004</b>	<b>39,246</b>	<b>988,389</b>	<b>1,207,639</b>	<b>3,456,004</b>	<b>736</b>	<b>4,664,380</b>	

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 Digest of Current Economic Statistics, Australia (monthly) (1305.0)  
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 Building Activity, Australia: Dwelling Unit Commencements, Preliminary (quarterly) (8750.0)  
 Building Activity, Australia, Summary (quarterly) (8751.0)  
 Building Activity, Australia (quarterly) (8752.0)  
 Construction (Other Than Building) Activity, Australia (quarterly) (8761.0)

Details for particular States are available from publications issued regularly by the Deputy Commonwealth Statistician in each State.

### Other Publications

The annual reports of the Commonwealth and State Government Housing Authorities show further details of government activities in the field of housing.

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**IN RETROSPECT**.....**Year Book No 29 (1936)**

Dwellings in tents (recorded at the 1933 Census of Population and Housing) increased in number by 9,005, or 31 per cent. As would be anticipated, owing to the provision of relief works for a large number of unemployed, 98 per cent of these canvas structures were located outside the metropolitan areas.

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## CHAPTER 20

### TRANSPORT AND COMMUNICATION

This chapter contains information on motor vehicles; roads; road traffic accidents; railways; shipping; air transport; bus, train and ferry services; postal services, internal and overseas telecommunication services; radio communication stations; broadcasting and television; and government bodies concerned with these activities.

More detailed figures and particulars for earlier years are included in the publications listed in the Bibliography at the end of the chapter.

#### TRANSPORT ORGANISATIONS

##### **The Australian Transport Advisory Council**

In April 1946, the State and Commonwealth Governments agreed to establish a co-ordinating and advisory committee at Ministerial level whose principal functions were to review annually the various laws and regulations deemed necessary to safeguard the interests of the State Governments and road users generally and to consider matters of transport policy.

The Australian Transport Advisory Council (ATAC), thus established now comprises the Commonwealth Minister for Transport and State/Territory Ministers responsible for transport, roads, marine and ports matters. The New Zealand Minister of Transport attends as an observer.

The Council has, on a number of occasions since its inception, reviewed and refined its procedures and operations. In July 1984, ATAC and the *Marine and Ports Council of Australia* (MPCA) agreed to amalgamate. At present it meets at least twice each year and its primary role is to review and co-ordinate various aspects of transport policy, development and administration. Its decisions are reached by consensus of all members. Council's functions are to initiate discussion and report on any matter raised by Council members and to advise on matters which will tend to promote a better co-ordination of, or research in, all modes of transport development for the benefit of Australian transport authorities and agencies. The ATAC structure consists of one policy advisory group reporting directly to ATAC, the *Standing Committee on Transport* (SCOT). SCOT comprises a representative of each ATAC minister—usually principal ministerial advisers, such as the Permanent Heads of the relevant Department and deals with overall issues of policy co-ordination and development. SCOT is supported by four groups of specialist advisers which cover the interests of road, rail, road safety and Marine and Ports.

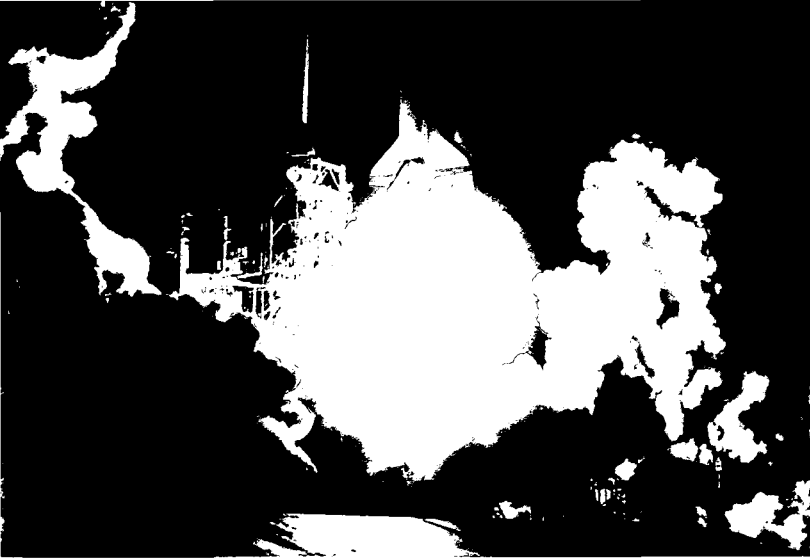
In addition the following technical committees and subsidiary bodies report to the Marine and Ports Group and the Road Safety Group:

- Ship Standards Advisory Committee
- Marine Pollution Advisory Committee
- Advisory Committee on Promotion and Education for Road Safety
- Road User and Trauma Advisory Committee
- Advisory Committee on Transport of Dangerous Goods
- Vehicle Standards Advisory Committee
- Advisory Committee on Vehicle Emissions and Noise
- Advisory Panel on Recall and Unsafe Parts
- Data Working Group
- Australian Motor Vehicle Certification Board.

##### **Transport Industries Advisory Council**

The Transport Industries Advisory Council (TIAC) was formed following the March 1971 Australian Transportation Conference. TIAC provides advice and comment to the Commonwealth Minister for Transport on policy issues as well as recommendations related to improving transport systems in Australia, including aviation.

The members of TIAC are drawn from senior management in all modes of transport, major consumers, Government bodies and unions. The Minister appoints members on the basis of personal expertise. New members, appointed annually, serve on the Council for



The launch of AUSSAT 1 on board the NASA Shuttle, *Discovery*, 27 August 1985.

*AUSSAT Pty Ltd*

About 350,000 Australians were beyond the reach of either radio or television before AUSSAT. For an outlay of about \$3,000 they can now enjoy the same communication links as the rest of Australia.

Other uses include communications to over 100 remote air fields by the Department of Aviation, remote access to video medical advice and education facilities for isolated children.



AUSSAT in space, as depicted on a postage stamp.

*Australia Post*

AUSSAT's main Control Centre at Belrose, Sydney. The larger antenna is used for command, control and telemetry, the smaller two for sending and receiving from the satellites.

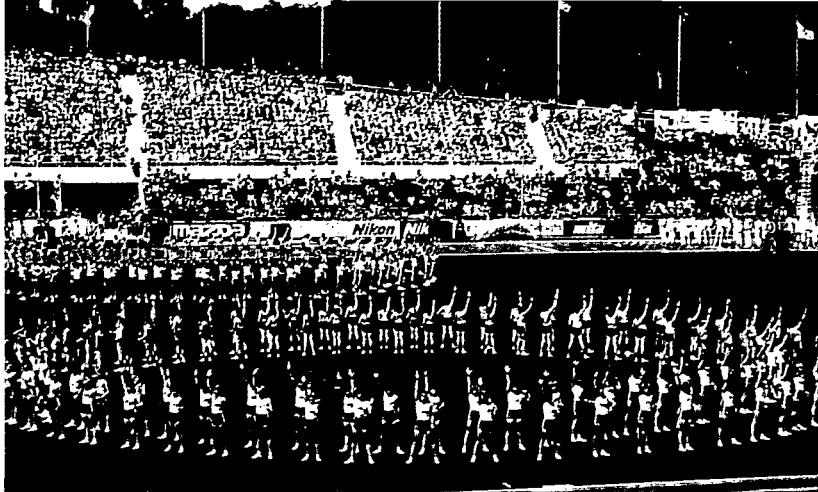
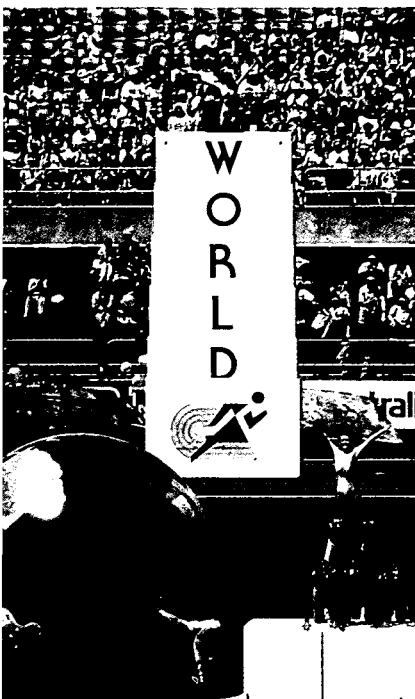
*AUSSAT Pty Ltd*



AUSSAT satellites orbit 35,780 kilometres above the equator, apparently stationary by keeping in step with the earth's rotation. Earth station antennas are kept trained constantly at the satellite to provide continuous communication. There are 8 major city earth stations, with the control centre at Belrose, just north of Sydney. Other business and communications organisations will progressively install earth stations of various sizes to suit their own purposes.

Some of AUSSAT's staff of 250 are already working on design plans for the second generation satellites to take over in about 7 years time.

The opening ceremony.



## FOURTH WORLD CUP IN ATHLETICS CANBERRA, 4-6 OCTOBER 1985

(For further detail see page 677).

*Photographs—Australian Information Service*

3,000 metres steeplechase.





# WORLD CUP ATHLETICS CANBERRA



Closing ceremony.

Medal presentation.



Autographs by Tonie Campbell, USA, winner 110 metres hurdles.



Womens 800 metres wheelchair event.



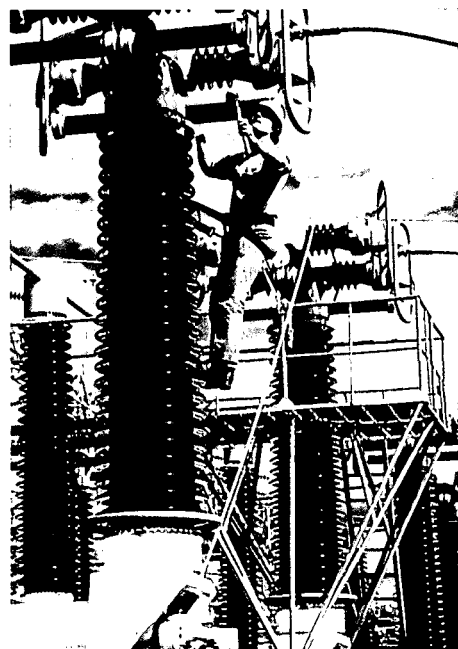


Murray 1 pumping station

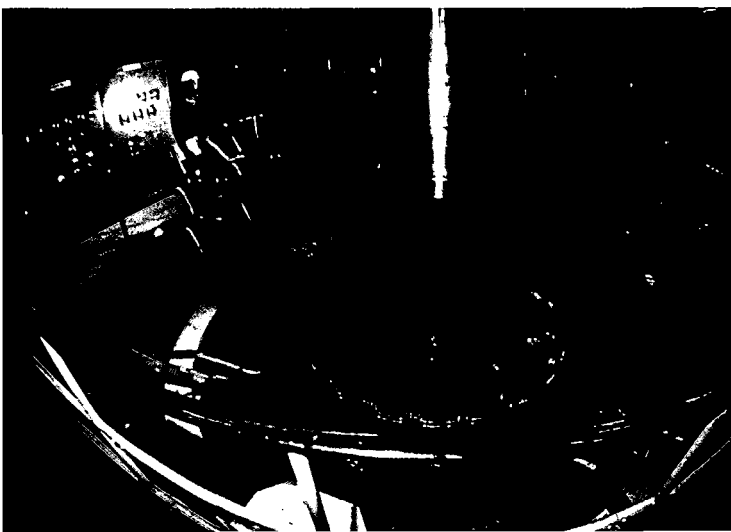
Twenty years ago, in April 1966, the first diversion of water was made from the Snowy River to the Murray. This was just one of many achievements in the Snowy Mountains dual purpose hydro electric and irrigation scheme.

A special article on the Snowy Scheme starts on page 430.

*Photographs—Australian Information Service*



Murray switching yard



Turbine generator—Murray 2 power station

extendable terms of three years. The full Council, which meets four times a year, operates through an Executive Committee and subject-specific Project Committees. A report of TIAC activities is published annually in the Department of Transport's Annual Report.

#### **Aviation Industry Advisory Council**

The Aviation Industry Advisory Council (AVIAC) was established in 1978 to enhance the level of consultation between the aviation industry and the Government. The Council provides advice to the Commonwealth Minister for Aviation on policies, plans and programs relating to the aviation industry within Australia, promotes the continuing development of a safe, efficient, economic aviation industry, and provides a forum for discussion of important matters of joint concern to the aviation industry and Government.

Membership of the Council consists of the Commonwealth Minister for Aviation (Chairman); Secretary to the Department of Aviation; Chairman of Qantas Airways Ltd; Chairman of Australian National Airlines Commission (TAA); Chairman of Regional Airlines Association of Australia Ltd; Chairman of East-West Airlines; National Chairman of the General Aviation Association; Joint Chairman of Ansett Transport Industries Ltd; National President of the Royal Federation of Aero Clubs of Australia and President of the Aircraft Owners and Pilots Association of Australia.

The AVIAC has established a Committee of Advisers to assist in the analysis and preparation of matters to put to the Council for deliberation and decision.

#### **National Airports Consultative Council**

The National Airports Consultative Council was formed in 1984 to provide the Minister for Aviation with advice on

- aspects relating to the establishment of a National Airports Authority
- matters of national concern regarding airports
- aviation, commercial, social and environmental aspects of airports policy.

Membership of the Council comprises representatives of the *Australian Mayoral Aviation Council*, the aviation industry, industry and departmental unions, tourism interests, the travelling public, the Australian Airport Owners' Association, the Secretary to the Department of Aviation, and the Commonwealth Minister for Aviation (Chairman).

#### **The Bureau of Transport Economics**

The Bureau of Transport Economics (BTE) is a professional research body which undertakes independent studies and investigations to assist the Commonwealth Government in formulating policy relating to all modes of transport.

The primary function of the BTE is to advise the Commonwealth Government on the economic, financial and technical aspects of air, road, rail and sea transport in Australia. In pursuit of this overall function, the BTE analyses the nature, capacity, performance and financing of transport systems. It also investigates the economic and resource allocation implications of such systems. The BTE has a secondary function of providing assistance to State and local governments, Commonwealth and State instrumentalities and the private sector to identify and address transport problems.

Although formally linked to the Commonwealth Department of Transport, the BTE has a considerable degree of professional and administrative autonomy and reports directly to the Minister for Transport on its program of research work.

## **SHIPPING**

### **Control of shipping**

#### **Commonwealth Government navigation and shipping legislation**

Commonwealth Acts concerned with shipping are: the *Navigation Act 1912*, the *Sea-Carriage of Goods Act 1924*, the *Seamen's Compensation Act 1911*, the *Seamen's War Pensions and Allowances Act 1940*, the *Protection of the Sea (Discharge of Oil from Ships) Act 1981*, the *Protection of the Sea (Civil Liability) Act 1981*, the *Protection of the Sea (Powers of Intervention) Act 1981*, the *Protection of the Sea (Shipping Levy) Act 1981*, the *Protection of the Sea (Shipping Levy Collection) Act 1981*, the *Australian Shipping Commission Act 1956*, the *Environment Protection (Sea Dumping) Act 1981*, the *Submarine Cables and Pipelines Protection Act 1963*, the *Lighthouses Act 1911*, the *Explosives Act 1961*, the *Inter-State Commission Act 1975*, the *King Island Harbour Agreement Act 1973*, the *King Island Shipping Service Agreement Act 1974*, the *Ship Construction Bounty Act 1975*, the *Trade Practices Act 1974 Part X*, the *Shipping Registration Act 1981*.

### Navigation Act 1912 as Amended

The Navigation Act, provides for various regulatory controls over ships and their crews, passengers and cargoes, mainly for the preservation of life and property at sea. Substantial penalties are provided for serious offences. The Act gives effect to a number of important international conventions produced under the aegis of the International Maritime Organisation (IMO).

There are 25 sets of Regulations under the Act, and a system of Marine Orders which give legislative effect to various safety and technical requirements in respect of ships, their cargoes and persons on board.

Taken in the order in which they appear in the Act, the main substantive matters dealt with are as follows:

*Masters and seamen.* Some sections deal with the examination of masters, mates and engineers for certificates of competency. Other sections ensure that appropriate conditions apply to crews serving on ships by providing for the supervision of the engagement, discharge and payment of wages; discipline at sea; the settlement of wages and other disputes; the return to their home port of distressed seamen; taking charge of wages and effects of deceased seamen and of those who have deserted or been left behind; and enquiries into deaths at sea. These matters are administered by Mercantile Marine Offices established at numerous ports. The health of seamen is cared for by the prescription of scales of medicines and medical stores to be carried by ships, and there are provisions to give effect to International Labour Organisation Convention requirements for the accommodation of crews. Plans for new or altered accommodation in ships have to be approved by a Crew Accommodation Committee.

There are requirements for the manning of ships and manning disputes are often dealt with by statutory Committees of Advice. The Act provides for a Marine Council to advise the Minister on the suitability of persons for engagement as seamen.

*Ships and shipping.* There are particularly important provisions dealing with ship safety in such matters as survey of ships, load lines, life-saving and fire appliances, prevention of collisions, and carriage of potentially dangerous cargoes. Whilst in Australia, all ships which trade interstate or overseas come under the survey provisions of the Navigation Act and require certificates issued by the Department of Transport unless they are registered in a country which is a party to the Convention concerned and hold valid certificates issued by their Governments and conforming to the requirements of the Safety of Life at Sea and Load Lines Conventions. There is power to detain any ship the condition of which does not conform with the conditions set out in its certificate or which appears to be overloaded or otherwise unseaworthy.

*Passengers.* These provisions deal with matters necessary or convenient for regulating the carriage of passengers in respect of such matters as numbers that may be carried, accommodation and health aspects.

*Offshore industry.* These provisions, deal with offshore industry vessels and offshore industry mobile units. Marine Orders giving effect to IMO resolutions on this sector of the marine industry were recently introduced.

*Coasting trade.* Under the coasting trade provisions of the Navigation Act, the Australian coastal trade is reserved for licensed vessels, i.e. those which employ seamen at Australian wage rates. The Act does not restrict the class of ships which may obtain a licence. It is open to any vessel irrespective of the registry to obtain a licence on compliance with this condition and to operate in the Australian coastal trade subject to permission being given for the importation of the vessel under the Customs (Prohibited Imports) Regulations where necessary. Provision exists for unlicensed vessels to operate in the coasting trade under single voyage permits in certain circumstances where licensed vessels are not available or are inadequate to meet the needs of the trade. Strict control is exercised over the issue of permits for the carriage of coastal cargoes.

*Wrecks and salvage.* There are provisions in relation to wrecks and salvage, covering preservation of life and of the wreck and its cargo and related matters.

*Limitation and exclusion of shipowners' liability.* These sections give effect to an international convention and make provision on the widest possible basis for the limitation of shipowners' liability in Australia.

*Courts of Marine Inquiry.* There are provisions for the holding of Courts of Marine Inquiry to investigate the circumstances attending any casualties to ships that come within Commonwealth legislative authority, usually following a preliminary investigation.

### Shipping Registration Act 1981

The *Shipping Registration Act 1981* received Royal Assent on 25 March 1981 and was proclaimed on 26 January 1982. This Act replaces Part I of the *U.K. Merchant Shipping Act 1894* under which ships in Australia were registered as British ships. The Act provides for all ships on the British register in Australia to be automatically transferred to the new Australian register. The Act has two basic objectives namely the conferring of Australian nationality on Australian-owned ships and the registration of ownership.

Taken in order in which they appear in the Act, the main substantive matters are as follows:

*Registration of ships.* This part deals with the obligation to register Australian-owned ships, the ships permitted to be registered, the application for registration, particulars to be entered in the Register, the issue of Registration Certificates, Provisional Registration Certificates and Temporary Passes, changes in ownership, marking and naming of the ship, nationality of ships, flags to be flown, assuming and concealing Australian nationality.

*Transfers, transmissions and mortgages.* This part deals with the transfer, transmission of ship and shares, the taking out, transfer, transmission transfer and discharge of mortgages and the entry of this information into the Register.

*Administration.* This part deals with the appointment of the Registrar, delegation of the powers of the Minister and Registrar, the establishment of the Shipping Registration Office and Branch Offices.

*Register of ships.* This part deals with the maintenance, rectification and inspection of the Register.

*Transitional provisions.* This part deals with the change over from the previous law to the new legislation. This includes the completion of transactions commenced under the previous law and the acceptability of documents prepared under the previous law.

### Australian Shipping Commission

The Commission was established by the *Australian Coastal Shipping Commission Act 1956*. Its role has been to establish, maintain and operate interstate, overseas and territorial shipping services. In October 1974 the Commission's title was changed to the Australian Shipping Commission to reflect the increasing importance of its overseas trading activities. In 1980 the Australian Shipping Commission Act was amended to increase the Commission's borrowing powers and give it greater flexibility in determining freight rates. Further amendments to the Act were introduced in 1983 giving the Commission greater control over its day-to-day operations and allowing it to operate more commercially.

As at 30 June 1985 the Commission, trading as the Australian National Line, owned and operated a fleet of twenty five ships. The fleet included fourteen ships engaged in overseas trades comprising seven liner ships totalling 173,712 deadweight tonnes and seven bulk carriers totalling 518,134 deadweight tonnes.

The fleet also included 11 ships engaged in coastal trade, six liner ships totalling 51,136 deadweight tonnes and five bulk carriers totalling 215,694 deadweight tonnes.

The Line operated specialised terminals at Adelaide, Melbourne, Burnie, Bell Bay, Sydney, Port Kembla and Brisbane.

In recent times the Line has faced severe financial difficulties reflecting the general downturn experienced by the shipping industry, particularly in international trade. In 1984 it initiated a review of all its services. It instituted a major rationalisation and as a result disposed of eight obsolete vessels, including the Line's only passenger vessel, 'Empress of Australia'. ANL also withdrew from its unprofitable North Queensland coastal liner services and East and West Coast North American liner services.

### Shipbuilding assistance

The shipbuilding industry in Australia has been assisted by the Government since the introduction of the shipbuilding subsidy scheme in 1947. The level of subsidy has been determined by the Government on the basis of inquiries into the industry by the former Tariff Board and, more recently, by the Industries Assistance Commission.

In May 1977, the Government sent a reference to the Commission on assistance to be accorded to the production of ships under 6,000 tg. The Commission reported to the Government on 25 July 1979 and on 29 November 1979 the Government announced new, simplified assistance arrangements for the Australian shipbuilding industry, with the introduction of the new Bounty (Ships) Act on 1 July 1980.



Under this Act, bounty continues to be accorded to the production in Australia of vessels over 150 gross construction tons, or over 21 metres in the case of fishing ships. Bounty is payable on a 'cost of construction basis' at a 1984-85 rate of 22.51 per cent, phasing down to a long-term rate of 20 per cent to apply from 1 July 1986.

Ships built at major yards include small cargo ships, offshore supply ships, passenger ferries, fishing ships, dredgers and barges. In addition, there are numerous smaller yards building non-bountiable ships such as pleasure craft, small fishing ships, and other small craft. Construction of large ships in Australia ceased in 1978.

In 1984-85 a total of 47 ships were completed at Australian yards (as compared with 85 in 1983-84 and 40 in 1982-83 and 55 in 1981-82).

Total financial assistance to the Australian shipbuilding industry in 1984-85 amounted to \$28.3m (as compared with \$26.6m in 1983-84, \$25.6m in 1982-83 and \$26.8m in 1981-82).

#### **Importation of ships**

The control of imports forms an integral part of the Government's shipbuilding assistance arrangements, complementing the bounty legislation. Under the Customs (Prohibited Imports) Regulations all ships are 'prohibited imports' and may not be imported into Australia except with the written permission of the Minister for Transport. For shipbuilding policy purposes, importation is permitted in the case of new ships, second-hand ships outside the size range 70 gross construction tonnes to 10,000 gross construction tonnes, and ships of a type not available new from Australian yards.

#### **Stevedoring industry**

In December 1977, legislation was introduced which provided for new administrative, financial and industrial arrangements for the stevedoring industry and abolished the Australian Stevedoring Industry Authority. The arrangements give the parties directly involved in the industry greater responsibility in the industry's affairs.

The Stevedoring Industry Finance Committee is responsible for the disbursement of funds collected through statutory man-hour and cargo levies.

A federal co-ordinating committee comprising representatives of the employers and the Waterside Workers' Federation (WWF) and Broken Hill Pty Ltd (BHP) and the Australian National Line oversees the operation of arrangements agreed to in the General Agreement between employers and the WWF. At the port level such matters are handled by Port Co-ordinating Committees set up in the major ports.

Under section 85A of the *Conciliation and Arbitration Act 1904* a Port Conciliator Service was created to assist parties to an industry award to implement the procedures of that award for the prevention or settling of disputes.

A non-statutory Stevedoring Industry Consultative Council chaired by Sir Alan Westerman, CBE, has been established to provide a forum for discussion and liaison between government(s), user interests and the operating sections of the industry. The Chairman is appointed by the Commonwealth Government.

The Statutory provisions relating to the industry are contained in the *Stevedoring Industry Finance Committee Act 1977*, the *Stevedoring Industry Levy Act 1977*, the *Stevedoring Industry Levy Collection Act 1977*, the *Port Statistics Act 1977* and sections 85A, 86 and 87 of the *Conciliation and Arbitration Act 1904*.

#### **Tasmanian Freight Equalisation Scheme**

The Tasmanian Freight Equalisation Scheme was introduced with effect from 1 July 1976 to provide assistance to the shippers of certain non-bulk goods between Tasmania and the mainland of Australia. The Scheme aims to alleviate the additional transport costs which have to be borne by Tasmanian shippers because of their separation from the mainland by sea. Responsibility for administration of the Scheme lies within the Transport portfolio.

The northbound component of the Scheme applies to specified goods produced in Tasmania which are shipped by sea to the mainland for use or sale. The southbound component covers certain raw materials, machinery and equipment used in Tasmania's manufacturing, mining and primary industries. In 1984-85 \$28.5 million in assistance was paid on northbound cargoes and \$1.6 million in assistance for southbound cargoes.

In 1984 the Federal Government requested the Inter-state Commission to investigate the Scheme. The Commission's report was published in March 1985. Following consideration of the report the Government decided to implement a number of changes to the Scheme recommended by the Commission with effect from 1 September 1985.

### **Trade Practices Act 1974 (Part X—Overseas Cargo Shipping)**

The Overseas Cargo Shipping provisions of the Trade Practices Act (Part X) are administered by the Transport portfolio.

Part X establishes conditions for the operation of outwards shipping conferences and individual shipowners operating in Australia's outwards trades. Conference agreements between several shipowners in a particular trade make provision for the fixing of common freight rates. They may also include provisions for pooling arrangements and shares of the trade and rationalised sailing schedules.

Part X exempts conferences from the generally applicable anti-restrictive provisions of the Act, and seeks to ensure adequate safeguards to protect shippers through:

- requiring the filing of outwards conference agreements;
- requiring shipowners to give undertakings to hold meaningful negotiations with the designated shipper body, the Australian Shippers' Council (ASC);
- providing for disapproval of a conference agreement to be exercised by the Governor-General on a number of prescribed grounds, such as a failure on the part of the shipowner to comply with an undertaking, lack of due regard to the need for overseas shipping services to be efficient, economical and adequate, prevention or hindrance of an Australian flag operator from engaging efficiently in overseas cargo shipping to a reasonable extent.

Comparable provisions apply to individual shipowners who are not party to a conference agreement.

### **Marine pollution**

The *Protection of the Sea (Discharge of Oil from Ships) Act 1981*, the *Protection of the Sea (Powers of Intervention) Act 1981*, the *Protection of the Sea (Civil Liability) Act 1981*, the *Protection of the Sea (Shipping Levy) and (Shipping Levy Collection) Acts 1981* currently provide the Commonwealth power to deal with matters relating to marine oil pollution.

The Acts respectively provide for the control of discharges at sea and provision of control equipment and procedures on ships; empower the Minister to intervene to take action to prevent or reduce pollution and makes provision relating to limitation of liability of oil tankers for oil pollution damage; and provide for the collection of a levy to finance the National Plan to Combat Pollution of the Sea by Oil.

Two further important Acts which will apply the provisions of the International Convention for the Prevention of Pollution from Ships 1973-78 are expected to be proclaimed in 1986. The *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* and the *Navigation (Protection of the Sea) Amendment Act 1983* will implement improved provisions concerning the prevention and limitation of pollution by oil and specified noxious substances and the prohibition or control of discharges of oil or noxious liquid substances at sea. The Acts will also (when proclaimed) require the provision of control equipment and operational procedures on ships.

## **Collection and presentation of statistics**

Statistics relating to shipping and cargo are compiled from information provided to the Australian Customs Services (ACS) by importers, exporters, shipping companies and their agents. This information is supplied to the ABS by ACS on a regular basis and is used to produce transport oriented statistics via the following two collections:

*Shipping and Cargo (B380)*. A direct collection from shipping companies of details of ship movements and cargo carried.

*Shipping and Air Cargo Commodity Statistics (SACCS)*. A collection which combines information from import and export documents submitted to the ACS with transport and shipping information to provide a comprehensive picture of the transport base of Australia's foreign trade.

### **Shipping and Cargo Statistics (B380)**

#### *The Scope of the Statistics.*

The statistics relate to ships calling at or departing from Australian ports for the purpose of carrying cargo from or to overseas ports. Details are not required for (i) naval ships; (ii) yachts and other craft used for pleasure; (iii) foreign fishing ships that neither load nor discharge cargo; (iv) Australian registered fishing ships operating from Australian ports; (v)

geographical survey ships, seismic survey ships, oceanographic survey ships; (vi) offshore oil drilling rigs and ships servicing them; (vii) ships of 200 registered net tonnes and under.

#### Period covered by the statistics

Shipping and cargo statistics are compiled, on a financial year basis, according to the period during which ships actually arrived or departed Australian shores.

#### Ship characteristics

##### *Ship recording*

Ship movement statistics are recorded as 'Ship Number' and 'Ship Calls'. 'Ship Number' relates to the number of overseas direct arrivals to, or departures from Australia. 'Ship Calls' relates to the number of port visits that an overseas ship makes in Australia. For example, an overseas ship which arrives direct in Brisbane and makes a further call in Sydney before departing for an overseas port from Melbourne is counted as one under 'Ship Number' for both arrivals (Brisbane) and departures (Melbourne) and as one arrival call and one departure call for each of the three ports.

##### *Ship type*

All ships are classified from *Lloyd's Register of Shipping* according to one of 11 ship types which describe them in terms of their structure or design. These 11 ship types are amalgamated into four broad categories as follows:

<i>Category</i>	<i>Ship types</i>
(a) General cargo ships . . . . .	Container ships Conventional cargo ships Roll on—Roll off ships Other cargo ships
(b) Tankers . . . . .	Gas carriers Liquid tankers
(c) Bulk carriers . . . . .	Dry bulk ships Dry/wet bulk ships
(d) Other ships . . . . .	Multi-purpose ships Passenger ships Other ships

##### *Type of service*

Ships are also classified according to the type of service they provide. The two types of service for which statistics are shown are:

- (a) liner service, (according to conference and non-conference) relates specifically to a ship which is operated by a carrier providing services on a specified route on a relatively regular basis; and
- (b) other service, which refers to all ships operating in other than a liner service.

Conference ships—A 'conference' is an association of shipowners which regulates the freight rates and terms and conditions of carriage of goods in any particular trade. Conferences only operate liner services and not charter services. Conference arrangements normally include provisions for sharing the trade, rationalising sailing schedules and pooling arrangements for resources and/or revenue.

#### Country of registration

The country of registration or flag of the ship refers to the country in which the ship is registered according to *Lloyd's Register of Shipping*.

#### Recording of cargo loaded or discharged

Returns for arrivals show cargo discharged, and returns for departures show cargo loaded, in terms of revenue tonnes and gross weight tonnes. A revenue tonne is the unit of quantity predominantly used in the shipping industry. It is the basis on which freight is charged and may be measured by mass (tonnes) or volume (cubic metres). Revenue tonnes statistics are consequently a mix of mass and volume units and should be used with care. Gross weight is the total weight in tonnes of cargo, excluding the weight of containers, irrespective of the basis on which freight is charged.

#### Container cargo

Statistics of container cargo refer only to cargo shipped in international containers (including flats but not pallets). To provide a standard measure, all statistics relating to

containers are expressed in terms of 20 ft units. A 40 ft container is therefore recorded as two twenty-foot equivalent units (or TEU's).

#### **Country of loading or discharge of overseas cargo**

In statistics of overseas shipping and cargo, the country of loading, or discharge, of overseas cargo is the country of location of the port where the cargo was loaded on to, or is to be discharged from, a reporting ship. The countries shown are not necessarily the countries of origin or ultimate destination of cargo because previous or subsequent transshipments of cargo are not taken into account. The statistics of cargo classified by the country in which it was loaded or discharged cannot therefore be compared directly with statistics of overseas trade classified by country of origin or consignment.

#### **Trade area**

Ports at which ships load or discharge cargo are allocated to their respective countries, which are in turn allocated to trade areas in accordance with the Classification of Trade Areas for Cargo Statistics.

#### **Units of measurement**

The cargo carrying capacity of ships has in the past been measured in terms of registered net tonnage. However, as from 1 July 1979 this statistic has been replaced by deadweight tonnage (DWT).

*Deadweight tonnage.* A measure of the total mass (weight, in tonnes) of cargo, stores, fuel, passengers and crew carried by the ship when loaded to her maximum summer loadline.

*Gross tonnage.* A measure of the enclosed internal volume of a ship and its superstructure, with certain spaces exempt, in units of 1 ton per 2.83 cubic metres.

## **Shipping and Air Cargo Commodity Statistics (SACCS)**

#### **The scope of the statistics**

Inward cargo statistics relate to cargo loaded overseas which is discharged from ships and aircraft at Australian ports and in respect of which Customs import documents have been received. Similarly, outward cargo statistics relate to cargo loaded on ships and aircraft at Australian ports for discharge at overseas ports and in respect of which Customs export documents have been received. Details are not included for: (i) goods imported and exported by parcel post; (ii) direct transit trade, ie, goods being trans-shipped or moved through Australia for purposes of transport only; (iii) migrants' and passengers' effects for which Customs documents are not required; (iv) certain materials under inter-governmental agreements for defence and similar projects for which Customs documents are not required; (v) ships and aircraft entering and departing Australia under their own power; (vi) to the extent that they can be identified, ships and aircraft purchased for use on overseas routes and any subsequent sales made of such vessels and aircraft; (vii) fish and other sea products landed in Australia and abroad directly from the high seas by Australian ships (such products landed in Australia directly from the high seas by foreign ships are included); (viii) ships and aircraft stores.

#### **Period covered by the statistics**

Although both foreign trade statistics and SACCS are compiled from the same source, imports and exports are recorded statistically in the month in which relevant documents are lodged with ACS, whereas SACCS are compiled according to the period during which goods were actually loaded and discharged in Australia.

#### **Commodity classification**

Commodities are classified according to the Australian Transport Freight Commodity Classification (ATFCC). The ATFCC is the Australian standard for classifying goods transported by any of the transport modes; sea, rail, road, air or pipeline. It is a four level classification defining commodities in terms of one or more categories of the Standard International Trade Classification (SITC) or the dissection of the SITC categories embodied in the Australian Import and Export Commodity Classification. At the lowest (the fourth) level of classification the ATFCC has 312 items.

#### **Valuation**

The recorded value of inward cargo is the free on board (f.o.b.) equivalent of the price when the sale of such cargo is conducted under open market conditions. This is in accordance with the provisions of the General Agreement on Tariffs and Trade (GATT) relating to

Customs valuation. The recorded value also includes the value of the outside package, other than international containers used for containerised cargo. As additional factors are also considered in arriving at the transaction value of goods for Customs purposes, the f.o.b. value may not always be the same as the Customs value.

For outward cargo, goods actually sold to overseas buyers prior to shipment are valued at the f.o.b. equivalent of the actual price paid to the exporter. Goods shipped on consignment are valued at the f.o.b. equivalent of the price that would have been paid to the exporter had he actually sold the goods to an importer in the country of final destination. As for inward cargo, the recorded value also includes the value of the outside package, other than international containers used for containerised cargo.

#### Units of quantity

SACCS statistics record gross weight tonnes for outward cargo only. Gross weight is the total weight in tonnes of cargo, excluding the weight of containers, irrespective of the basis on which freight is charged.

### Australian trading ships

The following table shows particulars of all Australian trading ships of 150 gross tons or more engaged in the regular overseas, interstate or intrastate services at 30 June 1984.

AUSTRALIAN TRADING SHIPS OF 150 GROSS TONS OR MORE  
30 JUNE 1984

(Source: Department of Transport)

<i>Ships</i>	<i>Number</i>	<i>DWT</i>	<i>Gross Tons</i>
<b>Intrastate—</b>			
Australian owned and registered . . . . .	17	343,275	231,521
Overseas owned, Australian registered . . . . .	1	3,333	2,880
<b>Intrastate fleet . . . . .</b>	<b>18</b>	<b>346,608</b>	<b>234,401</b>
<b>Interstate—</b>			
Australian owned and registered . . . . .	46	1,020,308	652,194
Overseas owned, Australian registered . . . . .	7	119,645	89,730
Overseas owned and registered . . . . .	4	110,712	65,544
<b>Interstate fleet . . . . .</b>	<b>57</b>	<b>1,250,665</b>	<b>807,468</b>
<b>Coastal fleet . . . . .</b>	<b>75</b>	<b>1,597,273</b>	<b>1,041,869</b>
<b>Overseas—</b>			
Australian owned and registered . . . . .	21	911,333	586,775
Overseas owned, Australian registered . . . . .	5	550,041	323,855
Overseas owned and registered . . . . .	8	413,713	243,500
<b>Overseas fleet . . . . .</b>	<b>34</b>	<b>1,875,087</b>	<b>1,154,130</b>
<b>Total Australian fleet . . . . .</b>	<b>109</b>	<b>3,472,360</b>	<b>2,195,999</b>

#### Ships registered in Australia

The following table shows the number of ships registered in Australia at 30 June 1985.

SHIPS REGISTERED IN AUSTRALIA AS AT 30 JUNE 1985

(Source: Department of Transport)

<i>Location</i>	<i>Nature of registration</i>					<i>Total</i>
	<i>Demise chartered(a)</i>	<i>Commercial</i>	<i>Government</i>	<i>Fishing</i>	<i>Pleasure</i>	
New South Wales . . . . .	6	232	1	323	1,385	1,947
Victoria . . . . .	1	109	20	152	396	678
Queensland . . . . .	6	146	30	576	616	1,374
Western Australia . . . . .	6	123	4	455	339	927
South Australia . . . . .	—	41	9	223	189	462
Tasmania . . . . .	—	87	3	204	165	459
Northern Territory . . . . .	—	15	2	68	109	194
<b>Total Australia . . . . .</b>	<b>19</b>	<b>753</b>	<b>69</b>	<b>2,001</b>	<b>3,199</b>	<b>6,041</b>

(a) A Demise chartered ship is a foreign owned ship chartered by way of a charter party to an Australian based operator, who is an Australian national and who under the charter party has whole possession and control of the ship, including the right to appoint the master and crew of the ship.

The following table shows the number and gross tonnage of trading ships of 150 tons or more registered in Australia at 30 June 1984, classified according to: (i) year of construction; (ii) type of trade in which the ships were engaged; and (iii) ships built in Australian or in overseas shipyards.

**AUSTRALIAN TRADING SHIPS OF 150 GROSS TONS OR MORE  
30 JUNE 1984**

(Source: Department of Transport)

Year of construction	Overseas and interstate ships		Intrastate ships		Ships built in Australian yards		Ships built overseas		Total ships	
	No.	Gross tons	No.	Gross tons	No.	Gross tons	No.	Gross tons	No.	Gross tons
1976 and earlier . . . . .	59	956,988	10	22,264	39	388,498	30	590,754	69	979,252
1977. . . . .	9	271,850	1	2,851	3	46,991	7	227,710	10	274,701
1978. . . . .	9	152,066	-	-	1	25,849	8	126,217	9	152,066
1979. . . . .	4	152,989	-	-	-	-	4	152,989	4	152,989
1980. . . . .	-	-	1	2,792	-	-	1	2,792	1	2,792
1981. . . . .	6	224,251	1	1,155	-	-	7	225,406	7	225,406
1982. . . . .	2	109,761	2	58,304	1	6,310	3	161,755	4	168,065
1983. . . . .	2	93,693	3	147,035	-	-	5	240,728	5	240,728
1984. . . . .	-	-	-	-	-	-	-	-	-	-
<b>Registered in Australia . . . . .</b>	<b>91</b>	<b>1,961,598</b>	<b>18</b>	<b>234,401</b>	<b>44</b>	<b>467,648</b>	<b>65</b>	<b>1,728,351</b>	<b>109</b>	<b>2,195,999</b>

### Harbour boards and trusts

For detailed information see the individual State Year Books.

### Overseas shipping

#### Ship movements into and out of Australia

The following table shows the movement of ships and cargo to and from overseas countries, for the years 1978-79 to 1983-84.

**OVERSEAS SHIPPING: SHIP AND CARGO MOVEMENTS**

	1978-79	1979-80	1980-81r	1981-82r	1982-83r	1983-84
<b>Arrivals—</b>						
<i>ship details</i>						
ship number . . . . .		5,677	6,249	5,965	5,839	5,516
DWT ('000 tonnes) . . . . .		n.a.	247,218	236,721	232,370	223,817
<i>cargo discharged</i>						
revenue tonnes ('000) . . . . .		28,637	31,028	32,469	31,300	27,904
gross weight ('000 tonnes) . . . . .		n.a.	26,219	26,756	25,741	23,028
<b>Departures—</b>						
<i>ship details</i>						
ship number . . . . .		5,655	6,168	5,884	5,798	5,706
DWT ('000 tonnes) . . . . .		n.a.	246,555	234,095	235,635	230,396
<i>cargo loaded</i>						
revenue tonnes ('000) . . . . .		167,304	188,681	179,280	176,449	170,429
gross weight ('000 tonnes) . . . . .		n.a.	187,778	178,381	175,634	169,483

The following table shows particulars of overseas shipping which arrived at or departed from Australian ports according to the country of registration of ships.

**OVERSEAS SHIPPING: SHIP DEPARTURES AND ARRIVALS BY COUNTRY OF REGISTRATION  
1983-84**

Country of registration	Departures		Arrivals	
	Ship number	DWT ('000 tonnes)	Ship number	DWT ('000 tonnes)
Australia	216	10,907	236	11,251
China—excl. Taiwan	222	7,832	227	7,848
—Taiwan	98	6,043	101	6,028
Denmark	74	1,599	72	1,537
Germany, Federal Republic of	143	2,681	142	2,576
Greece	361	13,651	344	13,020
Hong Kong	193	8,326	207	8,720
India	46	1,720	56	1,868
Japan	1,351	95,542	1,355	92,833
Korea, Republic of	221	12,049	210	11,156
Liberia	548	26,786	555	27,117
Malaysia	82	2,618	77	2,484
Netherlands	74	1,845	76	1,830
New Zealand	104	1,213	118	1,177
Norway	123	7,624	124	7,612
Panama	775	21,442	802	21,165
Philippines	113	3,898	120	3,986
Singapore, Republic of	176	4,856	179	4,857
Sweden	41	1,083	44	1,183
United Kingdom	387	15,262	396	15,353
United States of America	2	1	2	1
U.S.S.R.	133	2,147	133	2,040
Other countries	543	18,138	555	17,973
<b>Total All Countries</b>	<b>6,026</b>	<b>267,264</b>	<b>6,131</b>	<b>263,614</b>
With cargo	5,394	248,297	2,258	52,832
In ballast	632	18,966	3,873	210,783

**Overseas cargo according to country of registration of ships**

The following table shows total overseas cargo, loaded and discharged, according to the country in which the ships were registered.

**OVERSEAS CARGO LOADED AND DISCHARGED BY COUNTRY OF REGISTRATION OF SHIPS  
('000 revenue tonnes)**

Country of registration	1981-82		1982-83		1983-84	
	Loaded	Discharged	Loaded	Discharged	Loaded	Discharged
Australia	6,644	1,378	7,689	1,860	7,855	2,158
China—excl. Taiwan	4,150	347	3,472	249	5,606	531
—Taiwan	1,729	17	4,913	83	5,164	107
Denmark	544	513	711	415	840	443
Germany, Federal Republic of	1,419	1,096	838	1,024	1,116	1,102
Greece	10,452	2,720	7,233	1,679	10,173	1,598
Hong Kong	3,995	1,072	4,522	904	6,316	960
India	2,068	77	880	50	1,160	235
Japan	70,972	4,097	76,317	3,605	79,897	3,032
Korea, Republic of	5,712	375	6,235	259	9,321	433
Liberia	26,533	5,264	18,110	6,000	18,613	3,801
Malaysia	494	341	702	422	1,893	343
Netherlands	501	407	605	292	1,168	401
New Zealand	476	735	383	561	589	710
Norway	5,777	1,409	3,378	1,003	4,862	1,319
Panama	15,730	1,789	13,701	1,565	16,151	2,562
Philippines	1,371	72	1,833	73	3,101	358
Singapore, Republic of	3,335	1,206	3,164	1,194	3,667	699
Sweden	560	477	724	370	483	425
United Kingdom	7,292	4,822	6,737	4,044	7,602	3,836
United States of America	243	329	102	138	—	—
U.S.S.R.	1,223	532	1,011	508	1,408	382
Other Countries	5,231	2,230	7,169	1,607	11,427	3,081
<b>Total All Ships</b>	<b>176,449</b>	<b>31,300</b>	<b>170,429</b>	<b>27,904</b>	<b>198,414</b>	<b>28,516</b>

## Shipping at principal ports

The following two tables show the movement of overseas shipping and cargo at Australian ports during 1983-84. The first provides details of the ships calling at Australian ports and the gross weight of cargo loaded and discharged. The second classifies cargo loaded and discharged in terms of whether or not it was transported in ISO containers.

## OVERSEAS SHIP AND CARGO MOVEMENTS AT AUSTRALIAN PORTS, 1983-84

Australian port	Departures		Cargo loaded	Arrivals		Cargo discharged
	Ship details			Ship details		
	Ship calls	DWT ('000 tonnes)	Gross weight ('000 tonnes)	Ship calls	DWT ('000 tonnes)	Gross weight ('000 tonnes)
<b>New South Wales—</b>						
Sydney . . . . .	1,268	27,118	6,321	1,263	26,686	2,463
Botany Bay . . . . .	411	10,491	456	443	11,368	2,200
Newcastle . . . . .	646	29,207	21,797	638	28,118	1,143
Port Kembla . . . . .	217	11,448	8,050	211	10,934	492
Other . . . . .	57	1,399	852	52	1,225	26
<i>Total . . . . .</i>	<i>2,599</i>	<i>79,663</i>	<i>37,475</i>	<i>2,607</i>	<i>78,331</i>	<i>6,324</i>
<b>Victoria—</b>						
Melbourne . . . . .	1,366	26,000	2,005	1,403	26,919	2,719
Geelong . . . . .	247	6,757	1,873	247	6,865	1,448
Westernport . . . . .	164	6,766	2,329	164	6,841	12
Other . . . . .	88	2,760	1,029	89	2,783	141
<i>Total . . . . .</i>	<i>1,865</i>	<i>42,283</i>	<i>7,236</i>	<i>1,903</i>	<i>43,407</i>	<i>4,321</i>
<b>Queensland—</b>						
Brisbane . . . . .	944	19,241	3,531	956	19,453	1,340
Gladstone . . . . .	316	17,512	13,921	313	16,563	740
Hay Point . . . . .	234	22,633	16,542	232	21,862	—
Townsville . . . . .	230	4,375	1,434	230	4,337	84
Weipa . . . . .	82	3,463	2,204	84	3,625	146
Other . . . . .	326	5,726	2,875	327	5,485	103
<i>Total . . . . .</i>	<i>2,132</i>	<i>72,950</i>	<i>40,506</i>	<i>2,142</i>	<i>71,325</i>	<i>2,413</i>
<b>South Australia—</b>						
Port Adelaide . . . . .	445	8,709	1,532	446	8,520	479
Port Lincoln . . . . .	86	2,173	829	90	2,246	137
Port Pirie . . . . .	103	2,285	733	105	2,304	17
Port Stanvac . . . . .	47	2,376	256	51	2,752	1,463
Thevenard . . . . .	55	900	537	53	832	—
Whyalla . . . . .	34	1,020	547	34	995	189
Other . . . . .	76	2,024	831	74	2,002	41
<i>Total . . . . .</i>	<i>846</i>	<i>19,487</i>	<i>5,264</i>	<i>853</i>	<i>19,651</i>	<i>2,326</i>
<b>Western Australia—</b>						
Fremantle . . . . .	1,006	24,979	5,788	1,015	25,059	3,736
Bunbury . . . . .	149	4,362	2,491	152	4,507	256
Cape Cuvier . . . . .	10	523	457	9	466	—
Dampier . . . . .	470	41,738	35,542	470	40,505	217
Geraldton . . . . .	178	4,024	1,515	181	4,106	77
Port Hedland . . . . .	380	34,289	28,940	391	34,561	437
Port Walcott . . . . .	137	17,885	15,332	132	17,271	27
Yampi Sound . . . . .	34	2,934	2,290	35	2,794	—
Other . . . . .	235	4,390	2,294	236	4,447	177
<i>Total . . . . .</i>	<i>2,599</i>	<i>135,124</i>	<i>94,651</i>	<i>2,621</i>	<i>133,714</i>	<i>4,928</i>
<b>Tasmania—</b>						
Hobart . . . . .	167	3,368	784	166	3,396	189
Launceston . . . . .	130	4,036	1,897	131	4,095	170
Port Latta . . . . .	32	2,608	2,003	32	2,590	30
Other . . . . .	141	2,544	342	140	2,509	85
<i>Total . . . . .</i>	<i>470</i>	<i>12,556</i>	<i>5,026</i>	<i>469</i>	<i>12,591</i>	<i>476</i>
<b>Northern Territory—</b>						
Darwin . . . . .	90	1,205	13	90	1,254	426
Other . . . . .	178	6,701	4,729	178	6,585	782
<i>Total . . . . .</i>	<i>268</i>	<i>7,906</i>	<i>4,742</i>	<i>268</i>	<i>7,839</i>	<i>1,208</i>
Port not available for publication . . . . .	—	—	2,148	—	—	864
<b>Total all ports</b>	<b>10,779</b>	<b>369,968</b>	<b>197,048</b>	<b>10,863</b>	<b>366,859</b>	<b>22,859</b>



**OVERSEAS CONTAINER AND NON-CONTAINER CARGO LOADED AND DISCHARGED  
AT AUSTRALIAN PORTS, 1983-84**

(\*000 revenue tonnes)

<i>Australian port</i>	<i>Loaded</i>			<i>Discharged</i>		
	<i>Container cargo</i>	<i>Other cargo</i>	<i>Total</i>	<i>Container cargo</i>	<i>Other cargo</i>	<i>Total</i>
<b>New South Wales—</b>						
Sydney . . . . .	686	5,748	6,434	1,532	2,142	3,674
Botany Bay . . . . .	381	126	507	1,731	1,327	3,058
Newcastle . . . . .	31	21,801	21,831	17	1,128	1,145
Port Kembla . . . . .	—	8,104	8,104	—	492	492
Other . . . . .	2	875	877	1	26	27
<i>Total</i> . . . . .	<i>1,100</i>	<i>36,654</i>	<i>37,754</i>	<i>3,281</i>	<i>5,115</i>	<i>8,395</i>
<b>Victoria—</b>						
Melbourne . . . . .	1,634	715	2,349	2,560	1,990	4,549
Geelong . . . . .	33	1,848	1,880	1	1,454	1,454
Westernport . . . . .	26	2,346	2,372	—	12	12
Other . . . . .	16	1,018	1,034	—	141	141
<i>Total</i> . . . . .	<i>1,708</i>	<i>5,927</i>	<i>7,635</i>	<i>2,561</i>	<i>3,596</i>	<i>6,157</i>
<b>Queensland—</b>						
Brisbane . . . . .	487	3,106	3,593	389	1,643	2,033
Gladstone . . . . .	—	13,921	13,921	—	740	740
Hay Point . . . . .	—	16,542	16,542	—	—	—
Townsville . . . . .	47	1,387	1,434	9	136	145
Weipa . . . . .	—	2,204	2,204	—	146	146
Other . . . . .	7	2,869	2,876	1	102	103
<i>Total</i> . . . . .	<i>541</i>	<i>40,028</i>	<i>40,569</i>	<i>400</i>	<i>2,767</i>	<i>3,167</i>
<b>South Australia—</b>						
Port Adelaide . . . . .	116	1,583	1,699	103	663	765
Port Lincoln . . . . .	1	828	829	10	127	137
Port Pirie . . . . .	—	740	740	—	17	17
Port Stanvac . . . . .	2	254	256	—	1,463	1,463
Thevenard . . . . .	—	537	537	—	—	—
Whyalla . . . . .	—	547	547	—	189	189
Other . . . . .	—	831	831	—	41	41
<i>Total</i> . . . . .	<i>118</i>	<i>5,320</i>	<i>5,438</i>	<i>113</i>	<i>2,499</i>	<i>2,613</i>
<b>Western Australia—</b>						
Fremantle . . . . .	525	5,364	5,889	425	3,668	4,094
Bunbury . . . . .	—	2,496	2,496	—	256	256
Cape Cuvier . . . . .	—	457	457	—	—	—
Dampier . . . . .	—	35,559	35,559	—	218	218
Geraldton . . . . .	1	1,521	1,522	4	74	77
Port Hedland . . . . .	—	28,941	28,941	—	444	444
Port Walcott . . . . .	—	15,454	15,454	—	27	27
Yampi Sound . . . . .	—	2,290	2,290	—	—	—
Other . . . . .	2	2,301	2,303	6	173	179
<i>Total</i> . . . . .	<i>527</i>	<i>94,384</i>	<i>94,911</i>	<i>436</i>	<i>4,859</i>	<i>5,295</i>
<b>Tasmania—</b>						
Hobart . . . . .	1	787	787	1	218	219
Launceston . . . . .	2	1,896	1,897	1	172	172
Port Latta . . . . .	—	2,003	2,003	—	30	30
Other . . . . .	92	258	350	23	68	91
<i>Total</i> . . . . .	<i>94</i>	<i>4,944</i>	<i>5,037</i>	<i>25</i>	<i>488</i>	<i>513</i>
<b>Northern Territory—</b>						
Darwin . . . . .	—	10	18	2	471	473
Other . . . . .	—	4,729	4,729	—	782	782
<i>Total</i> . . . . .	<i>8</i>	<i>4,739</i>	<i>4,747</i>	<i>2</i>	<i>1,253</i>	<i>1,255</i>
Port not available for publication	612	1,710	2,322	480	641	1,121
<b>Total all ports</b>	<b>4,708</b>	<b>193,705</b>	<b>198,414</b>	<b>7,296</b>	<b>21,220</b>	<b>28,516</b>

## Overseas cargo according to trade area and ship type

The following table shows details of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas classified according to the various trade areas of the world and by ship type.

OVERSEAS CARGO BY TRADE AREA OF PORT OF DISCHARGE/LOADING BY SHIP TYPE, 1983-84  
(\*000 revenue tonnes)

Trade area	General cargo ships	Tankers	Bulk carriers	Other ships	All ships
—Outward cargo—					
Europe . . . . .	1,258	323	31,177	154	32,911
East Asia . . . . .	797	164	13,684	139	14,784
Japan . . . . .	3,176	2,764	111,047	23	117,010
N. America—E. Coast. . . . .	551	214	2,608	3	3,375
N. America—W. Coast . . . . .	371	639	2,754	9	3,773
Central America . . . . .	10	82	85	—	177
S. America—E. Coast . . . . .	6	24	837	—	867
S. America—W. Coast. . . . .	13	—	69	—	83
West Africa . . . . .	3	—	6	—	8
South and East Africa. . . . .	90	77	536	—	703
Red Sea . . . . .	332	11	1,797	—	2,140
Persian Gulf. . . . .	395	27	3,830	—	4,252
West India . . . . .	71	54	620	—	745
East India . . . . .	82	35	752	—	869
South East Asia . . . . .	1,570	659	5,245	90	7,564
New Zealand . . . . .	832	625	741	123	2,322
Papua New Guinea . . . . .	415	249	557	—	1,221
Central Pacific . . . . .	211	263	2	—	476
French Pacific . . . . .	85	7	89	—	181
Pacific Islands . . . . .	13	—	62	—	75
Trade area not specified . . . . .	25	—	123	—	148
Trade area not available for publication . . . . .	50	14	4,666	—	4,729
<b>Total outward overseas cargo . . . . .</b>	<b>10,356</b>	<b>6,232</b>	<b>181,286</b>	<b>540</b>	<b>198,414</b>
—Inward cargo—					
Europe . . . . .	2,735	523	430	8	3,696
East Asia . . . . .	1,008	10	238	60	1,316
Japan . . . . .	2,290	249	3,439	87	6,065
N. America—E. Coast. . . . .	613	517	1,046	15	2,191
N. America—W. Coast . . . . .	861	507	1,303	12	2,683
Central America . . . . .	—	130	30	—	160
S. America—E. Coast . . . . .	77	29	9	—	115
S. America—W. Coast. . . . .	1	5	—	—	6
West Africa . . . . .	2	—	—	—	2
South and East Africa. . . . .	170	—	113	—	283
Red Sea . . . . .	48	108	54	—	210
Persian Gulf. . . . .	25	5,777	512	—	6,313
West India . . . . .	52	—	—	—	53
East India . . . . .	62	—	—	—	62
South East Asia . . . . .	720	1,801	594	22	3,138
New Zealand . . . . .	720	56	271	74	1,121
Papua New Guinea . . . . .	62	3	27	—	92
Central Pacific . . . . .	25	1	—	—	26
French Pacific . . . . .	2	—	—	—	2
Pacific Islands . . . . .	16	—	868	—	884
Trade area not specified . . . . .	14	50	33	—	98
<b>Total inward overseas cargo . . . . .</b>	<b>9,505</b>	<b>9,767</b>	<b>8,966</b>	<b>278</b>	<b>28,516</b>

## Overseas cargo according to trade area and type of service

The following table shows details of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas, classified according to the various trade areas of the world and by type of shipping service.

**OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA BY TRADE AREA OF PORT OF DISCHARGE/LOADING BY TYPE OF SERVICE, 1983-84**

('000 revenue tonnes)

Trade area	Outward overseas cargo			Inward overseas cargo		
	Liner service		Other ships	Liner service		Other ships
	Conference	Non-Conference		Conference	Non-Conference	
Europe . . . . .	742	137	32,032	1,957	544	1,195
East Asia . . . . .	345	230	14,208	495	478	343
Japan . . . . .	775	269	115,965	1,029	115	4,922
North America—E. Coast . . . . .	364	202	2,810	579	96	1,516
North America—W. Coast . . . . .	303	137	3,333	769	429	1,486
Central America . . . . .	10	—	167	—	—	160
South America—E. Coast . . . . .	1	4	862	2	43	70
South America—W. Coast . . . . .	—	—	83	1	—	5
West Africa . . . . .	—	—	8	2	—	—
South and East Africa . . . . .	1	86	616	29	94	159
Red Sea . . . . .	29	21	2,090	1	44	165
Persian Gulf . . . . .	109	8	4,134	2	4	6,308
West India . . . . .	66	3	676	48	2	2
East India . . . . .	39	—	830	52	—	10
South East Asia . . . . .	622	284	6,658	497	109	2,532
New Zealand . . . . .	572	56	1,694	622	33	466
Papua New Guinea . . . . .	260	107	855	38	12	42
Central Pacific . . . . .	136	29	311	14	10	1
French Pacific . . . . .	49	12	120	2	—	—
Pacific Islands . . . . .	9	16	49	2	340	542
Trade area not specified . . . . .	—	8	140	1	10	87
Trade area not available for publication . . . . .	19	—	4,710	—	—	—
<b>Total overseas cargo . . . . .</b>	<b>4,449</b>	<b>1,611</b>	<b>192,353</b>	<b>6,141</b>	<b>2,365</b>	<b>20,009</b>

## Overseas cargo commodity details

The following three tables classify inward and outward overseas cargo according to the Australian Transport Freight Commodity Classification (ATFCC). The second and third tables also provide details of the type of shipping service by which cargo was transported.

**INWARD AND OUTWARD OVERSEAS CARGO: SEA: BY SELECTED COMMODITIES, 1983-84**  
(S'000)

<i>ATFCC Division and Title</i>	<i>Inward cargo</i>	<i>Outward cargo</i>
00 Live animals . . . . .	232	263,189
01 Meat and meat preparations . . . . .	9,391	1,328,696
02 Dairy products and eggs . . . . .	67,710	361,570
03 Fish, crustaceans and molluscs and preparations thereof . . . . .	246,067	340,120
04 Cereals and cereal preparations . . . . .	46,071	2,873,974
05 Fruit and vegetables; sugar cane . . . . .	216,243	195,835
06 Sugar, sugar preparations and honey . . . . .	17,386	664,525
09 Coffee, tea, cocoa, spices, margarine and miscellaneous edible products and preparations(a) . . . . .	203,934	58,912
21 Hides, skins and furskins, raw . . . . .	1,487	259,922
24 Wood, timber and cork . . . . .	231,787	15,531
26 Textile fibres (not wool tops) and wastes (not manufactured into yarn or fabric) . . . . .	105,093	2,029,223
28 Metalliferous ores and metal scrap . . . . .	17,525	2,528,293
32 Coal, coke and briquettes . . . . .	4,163	3,462,822
33 Petroleum, petroleum products and related materials(a) . . . . .	2,185,744	1,097,700
51 Organic and inorganic chemicals(a) . . . . .	557,787	49,306
58 Plastic materials, artificial resins and cellulose esters and ethers . . . . .	355,266	46,547
59 Explosives and other chemical materials and products . . . . .	268,263	57,263
62 Rubber manufactures, n.e.s. . . . .	287,244	10,447
64 Paper, paperboard and articles of paper pulp, of paper or of paper-board . . . . .	612,664	50,300
65 Textile yarns, fabrics, made-up articles, n.e.s. and related products(a) . . . . .	1,197,740	29,699
66 Non-metallic mineral manufactures, n.e.s.(a) . . . . .	302,858	46,269
67 Iron and steel(a) . . . . .	389,070	378,361
68 Non-ferrous metals(a) . . . . .	77,113	784,420
69 Manufactures of metal, n.e.s.(a) . . . . .	520,998	161,921
71 Machinery, equipment, apparatus and appliances(a) . . . . .	4,300,204	546,382
78 Road vehicles and other transport equipment . . . . .	2,421,755	282,159
84 Articles of apparel and clothing accessories and footwear . . . . .	445,277	8,583
87 Professional, scientific and controlling apparatus, n.e.s.; photographic apparatus, equipment and supplies; optical goods, n.e.s.; watches and clocks . . . . .	407,334	96,264
89 Printed matter, plastic wares, toys and other miscellaneous manufactured articles(a) . . . . .	1,111,723	92,552
99 Coins, n.e.s, temporary ships/structures; (includes commodities not available)(b) . . . . .	790,999	3,281,349
Other . . . . .	1,969,733	685,451
<b>Total all commodities . . . . .</b>	<b>19,368,861</b>	<b>22,017,585</b>

(a) Excludes commodities regarded as confidential. These items are included in Division 99. confidential.

(b) Includes commodities regarded as confidential.

**INWARD OVERSEAS CARGO: SEA: BY COMMODITY BY TYPE OF SERVICE, 1982-83 AND 1983-84**  
(S'000)

ATFCC Section and title	Year ended 30 June	Liner Service			Total
		Conference	Non-conference	Other	
0 Food and live animals (a)	1983	458,562	161,346	74,268	694,176
	1984	578,644	166,809	91,190	836,642
1 Beverages and tobacco	1983	123,376	34,804	20,096	178,276
	1984	133,849	47,169	15,184	196,201
2 Crude materials, inedible, except fuels (a)	1983	271,737	94,102	253,401	619,240
	1984	375,828	127,574	241,188	744,590
3 Mineral fuels, lubricants and related materials (a)	1983	35,900	6,236	2,887,521	2,929,657
	1984	17,068	8,321	2,165,812	2,191,201
4 Animal and vegetable oils, fats and waxes	1983	21,632	7,512	52,717	81,861
	1984	29,426	11,719	71,822	112,967
5 Chemical and related products, n.e.s. (a)	1983	697,801	239,757	374,795	1,312,353
	1984	920,154	289,175	420,897	1,630,226
6 Manufactured goods classified chiefly by material (a)	1983	1,877,900	545,679	645,494	3,069,073
	1984	2,345,542	635,180	561,537	3,542,259
7 Machinery and transport equipment (a)	1983	3,516,904	664,450	1,808,327	5,989,680
	1984	3,947,583	668,807	2,105,568	6,721,959
8 Miscellaneous manufactured articles (a)	1983	1,230,869	447,356	135,890	1,814,115
	1984	1,469,689	502,684	128,252	2,100,625
9 Commodities and transactions, n.e.s. (includes commodities not available) (b)	1983	397,691	106,364	435,352	939,408
	1984	769,968	174,559	347,665	1,292,191
Total all commodities	1983	8,632,371	2,307,607	6,687,861	17,627,839
	1984	10,587,750	2,631,997	6,149,115	19,368,861

(a) Excludes commodities regarded as confidential. These items are included in Section 9. (b) Includes commodities regarded as confidential.

**OUTWARD OVERSEAS CARGO: SEA: BY COMMODITY BY TYPE OF SERVICE, 1982-83 AND 1983-84**

ATFCC Section and title	Year ended 30 June	Liner Service				Other		Total	
		Conference		Non-conference		Gross weight (tonnes)	Gross weight (\$,000)	Gross weight (tonnes)	Gross weight (\$,000)
		Gross weight (tonnes)	(\$,000)	Gross weight (tonnes)	(\$,000)				
0 Food and live animals (a)	1983	1,800,840	2,098,959	721,591	402,190	12,581,936	2,697,085	15,104,367	5,198,234
	1984	1,813,867	2,235,380	536,661	279,912	18,727,435	3,665,919	21,077,962	6,181,211
1 Beverages and tobacco (a)	1983	20,457	21,945	9,214	11,172	2,512	2,825	32,184	35,942
	1984	21,092	28,494	5,674	8,524	1,464	1,985	28,230	39,003
2 Crude materials, inedible, except fuels (a)	1983	1,053,526	1,658,126	586,056	731,466	79,564,351	2,446,479	81,203,932	4,836,071
	1984	948,026	2,007,335	580,344	727,744	90,194,681	2,233,462	91,723,050	4,968,541
3 Mineral fuels, lubricants and related materials (a)	1983	220,482	25,932	47,204	8,308	55,745,420	3,697,168	56,013,106	3,731,408
	1984	276,422	29,411	160,879	16,433	70,293,224	4,514,678	70,730,525	4,560,522
4 Animal and vegetable oils, fats and waxes	1983	24,296	14,131	22,874	10,266	157,958	61,950	205,129	86,347
	1984	16,808	12,041	24,751	13,650	159,466	76,928	201,026	102,618
5 Chemical and related products, n.e.s. (a)	1983	267,507	161,327	31,539	45,675	116,795	39,954	415,841	246,955
	1984	115,569	177,344	29,225	41,324	108,988	39,464	253,783	258,132
6 Manufactured goods classified chiefly by material (a)	1983	837,747	637,316	293,468	195,014	1,916,850	710,232	3,048,065	1,542,561
	1984	719,458	684,562	186,725	170,281	1,345,076	587,600	2,251,259	1,442,443
7 Machinery and transport equipment (a)	1983	95,529	544,838	29,116	137,471	13,131	86,360	137,777	768,570
	1984	106,076	596,862	21,490	112,168	54,959	119,511	182,525	828,541
8 Miscellaneous manufactured articles (a)	1983	25,208	161,253	7,444	33,993	1,590	9,051	34,242	204,298
	1984	26,612	176,803	4,723	23,075	2,741	12,540	34,076	212,418
9 Commodities and transactions, n.e.s. (includes commodities not available) (b)	1983	495,934	784,488	177,764	202,811	17,303,105	2,002,574	17,976,804	2,989,873
	1984	612,507	940,595	109,621	147,616	22,631,206	2,335,945	23,353,334	3,424,156
Total all commodities	1983	4,841,529	6,108,315	1,926,271	1,778,367	167,403,648	11,753,677	174,171,448	19,640,359
	1984	4,656,439	6,888,826	1,660,091	1,540,726	203,519,240	13,588,032	209,835,769	22,017,585

(a) Excludes commodities regarded as confidential. These items are included in Section 9. (b) Includes commodities regarded as confidential.

### Coastal shipping cargo

The following table shows the gross weight of cargo loaded at an Australian port for discharge at another Australian port. Both inter and intra-state cargo movements are included. Cargo loaded at, or to be discharged at, an overseas port is excluded.

#### COASTAL CARGO LOADED AND DISCHARGED AT AUSTRALIAN PORTS, 1983-84

('000 gross weight tonnes)

(Source: Department of Transport)

Australian port	Loaded			Discharged		
	Interstate	Intrastate	Total	Interstate	Intrastate	Total
<b>New South Wales—</b>						
Port Jackson . . . . .	104	2	106	2,593	1,734	4,327
Botany Bay . . . . .	674	879	1,553	4,361	—	4,361
Newcastle . . . . .	365	31	396	2,891	142	3,033
Port Kembla . . . . .	1,983	52	2,035	5,278	201	5,479
Other . . . . .	—	1,354	1,354	13	258	271
<i>Total</i> . . . . .	<i>3,126</i>	<i>2,318</i>	<i>5,444</i>	<i>15,136</i>	<i>2,335</i>	<i>17,471</i>
<b>Victoria—</b>						
Melbourne . . . . .	1,223	61	1,284	1,575	—	1,575
Geelong . . . . .	1,261	161	1,422	554	—	554
Westernport . . . . .	9,359	3	9,362	737	8	745
Other . . . . .	38	284	322	52	237	289
<i>Total</i> . . . . .	<i>11,881</i>	<i>509</i>	<i>12,390</i>	<i>2,918</i>	<i>245</i>	<i>3,163</i>
<b>Queensland—</b>						
Brisbane . . . . .	368	1,077	1,445	3,885	404	4,289
Gladstone . . . . .	424	377	801	317	6,732	7,049
Hay Point . . . . .	—	—	—	—	—	—
Mackay . . . . .	125	1	126	118	179	297
Townsville . . . . .	134	4	138	278	229	507
Weipa . . . . .	—	6,368	6,368	—	27	27
Other . . . . .	659	59	718	106	542	648
<i>Total</i> . . . . .	<i>1,710</i>	<i>7,886</i>	<i>9,596</i>	<i>4,704</i>	<i>8,113</i>	<i>12,817</i>
<b>South Australia—</b>						
Adelaide . . . . .	259	80	339	529	621	1,150
Port Pirie . . . . .	125	—	125	203	13	216
Port Stanvac . . . . .	426	6	432	640	136	776
Whyalla . . . . .	372	—	372	1,069	120	1,189
Other . . . . .	1,699	916	2,615	106	101	207
<i>Total</i> . . . . .	<i>2,881</i>	<i>1,002</i>	<i>3,883</i>	<i>2,547</i>	<i>991</i>	<i>3,538</i>
<b>Western Australia—</b>						
Fremantle . . . . .	924	701	1,625	1,828	474	2,302
Bunbury . . . . .	478	—	478	5	160	165
Dampier . . . . .	—	—	—	—	—	—
Port Hedland . . . . .	5,090	21	5,111	—	175	1,175
Port Walcott . . . . .	—	—	—	—	46	46
Yampi Sound . . . . .	908	1	909	—	18	18
Other . . . . .	631	516	1,147	123	384	507
<i>Total</i> . . . . .	<i>8,031</i>	<i>1,239</i>	<i>9,270</i>	<i>1,956</i>	<i>1,257</i>	<i>3,213</i>
<b>Tasmania—</b>						
Hobart . . . . .	531	45	576	655	145	800
Burnie . . . . .	318	138	456	339	58	397
Devonport . . . . .	452	—	452	289	—	289
Launceston . . . . .	311	16	327	1,025	5	1,030
Other . . . . .	62	16	78	46	30	76
<i>Total</i> . . . . .	<i>1,674</i>	<i>215</i>	<i>1,889</i>	<i>2,354</i>	<i>238</i>	<i>2,592</i>
<b>Northern Territory—</b>						
Darwin . . . . .	8	16	24	264	6	270
Other . . . . .	319	11	330	42	15	57
<i>Total</i> . . . . .	<i>327</i>	<i>27</i>	<i>354</i>	<i>306</i>	<i>21</i>	<i>327</i>
<b>Total all ports</b> . . . . .	<b>29,630</b>	<b>13,196</b>	<b>42,826</b>	<b>29,921</b>	<b>13,200</b>	<b>43,121</b>

## RAILWAYS

### Government railways

Government railways in Australia operate in all States and Territories and provide an important means of transportation. In 1983-84 a total of 142.2 million tonnes of freight was carried, an increase of 126.8 per cent over the 62.7 million tonnes carried in 1963-64. However, in the same twenty-year period, the number of passengers carried (mostly within the suburban areas of Sydney and Melbourne) declined by 22.8 per cent from 448 million in 1963-64 to 346 million in 1983-84. The number of train-kilometres run during 1983-84 (193 million) was an increase of 24.5 per cent since 1963-64 (155 million). Since the introduction of the first mainline diesel-electric locomotives in 1950, their numbers have increased greatly until at 30 June 1984 there were 1,657 throughout Australia.

The Australian National Railways Commission (ANRC) assumed full control over the Tasmanian and non-metropolitan South Australian railways, including those formerly managed by the Commonwealth Railways, on 1 March 1978. Urban rail services in South Australia remain the responsibility of the State Transport Authority (STA) and particulars of these are shown as the South Australian railway system.

Due to changes in accounting procedures and the introduction of a multi-modal system of travel, i.e. one ticket can cover a journey involving more than one mode, the STA cannot provide, in many instances, separate particulars for train, bus and tram services operated by that authority. Where data is not separately identifiable it has been included in relevant tables in the railway section of this year book.

#### Railway development

Details outlining railway development in Australia are given in Year Book No. 61, page 380. One feature of the Australian government railways is the variety of gauges to which they are built. There are three principal gauges: 'broad' (1,600 mm), 'standard' (1,435 mm), and 'narrow' (1,067 mm). Extensive route-kilometres of 1,067 mm gauge railway were built in areas where traffic volumes were initially known to be small and where it was imperative to minimise the costs of construction.

#### Government railway systems

The six government owned railway systems are operated by the State Rail Authority of New South Wales (SRA), 'V/Line' operated by the State Transit Authority of Victoria, Queensland Government Railways (QR), Western Australian Government Railways Commission (WAGRC), the State Transport Authority of South Australia (STA), and Australian National Railways Commission (ANRC).

As the Australian National system includes routes in more than one State, and the Victorian system extends into New South Wales, the system route-kilometres shown in the following table do not represent route-kilometres within each State and Territory.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY GAUGE AND SYSTEM  
30 JUNE 1984  
(Kilometres)

System	Gauge				Total
	1600 mm	1435 mm	1067 mm	Dual (a)	
New South Wales . . . . .	—	(b) 9,884	—	—	(b) 9,884
Victoria . . . . .	(c) 5,458	313	—	12	(c) 5,783
Queensland . . . . .	—	(d) 111	(e) 10,270	—	10,381
South Australia . . . . .	130	—	—	—	130
Western Australia . . . . .	—	1,213	4,239	171	5,623
Australian National . . . . .	2,001	3,636	1,813	—	7,450
<b>Australia . . . . .</b>	<b>7,589</b>	<b>15,157</b>	<b>16,322</b>	<b>183</b>	<b>39,251</b>

(a) VR operates a 1600 mm/1435 mm dual gauge line and WAGR operates a 1435 mm/1067 mm dual gauge line. (b) Includes 563 kilometres which are electrified. (c) Includes 452 kilometres of 1600 mm gauge line operating in New South Wales. Includes 417 route-kilometres which are electrified. (d) Operated by the State Rail Authority of New South Wales which is reimbursed for the cost of operations. (e) Includes 150 route-kilometres which are electrified.

The following table sets out the route kilometres of each government railways system from 1979 to 1984.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY SYSTEM, 1979 TO 1984  
(Kilometres)

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Total
1979 . . . . .	9,820	6,184	9,789	142	5,770	7,683	39,388
1980 . . . . .	9,773	6,184	9,904	142	5,773	7,687	39,463
1981 . . . . .	9,773	5,870	9,932	140	5,773	7,648	39,136
1982 . . . . .	9,773	5,812	9,970	141	5,609	7,638	38,943
1983 . . . . .	9,883	5,815	9,979	131	5,610	7,647	39,065
1984 . . . . .	9,884	5,783	10,381	130	5,623	7,450	39,251

The SRA (1435 mm gauge) operates lines radiating southwest and west from Sydney, northwest from Newcastle, and north from Sydney to Brisbane. QR (1067 mm gauge) operates a coastal line from Brisbane to Cairns, with long branches inland from the major ports. V/Line (1600 mm gauge, with the 1435 mm gauge Albury to Melbourne line) operates a network throughout Victoria and extending into New South Wales. WAGR (1067 mm gauge) operates in south-western Western Australia, and also operates standard gauge (1435 mm) from Perth to Kalgoorlie, Esperance and Leonora. The STA (1600 mm gauge) operates railways in the Adelaide metropolitan area only. Australian National operates the non-metropolitan railways in South Australia (1600 mm, 1435 mm and 1067 mm gauge), including the isolated Eyre Peninsula system (1067 mm gauge), the Tasmanian main line from Hobart to Launceston, with its branches (1067 mm gauge) and the railways (1435 mm gauge) from Kalgoorlie to Port Augusta (the Trans Australian Railway) and from Port Augusta to Broken Hill, Port Augusta to Marree, the Central Australia Railway from Tarcoola to Alice Springs, and the A.C.T. railway (Queanbeyan to Canberra). Services on the line between Darwin and Larrimah, the North Australia Railway, (1067 mm gauge) were withdrawn on 30 June 1976 and the line was officially closed effective as from 11 February 1981.

With regard to urban rail, Sydney and Melbourne have major electrified suburban rail systems which include some underground lines. The Brisbane suburban system is being upgraded and electrified. Adelaide and Perth have smaller-scale, non-electric urban rail networks. Rail services in the urban and inter-urban areas of Sydney, Newcastle and Wollongong are provided by the SRA in conjunction with the Urban Transit Authority of New South Wales which has responsibility for co-ordination of transport services in these areas. Similarly, metropolitan rail services in Perth are operated by the WAGR on behalf of and at the direction of the Metropolitan Transport Trust.

Construction of a standard gauge connection between Adelaide and the east-west mainline at Crystal Brook was completed in December 1982, the project being undertaken by Australian National. All mainland State capital cities are now connected to the standard gauge network.

Australian National opened a new Passenger Terminal in Adelaide (at Keswick) for Interstate and South Australian country services in June 1984.

The all-weather standard gauge railway from Tarcoola to Alice Springs was officially opened in October 1980. Upon transfer of rail services to this new line, the narrow gauge section of the Central Australia Railway from Marree to Alice Springs was officially closed effective as from 1 January 1981.

### Operations of Government railway systems

Particulars of train-kilometres, passenger journeys, freight-tonnes carried, and freight tonne-kilometres included in this section refer only to operations for which revenue is received.



## Summary of operations

## GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, SYSTEMS, 1983-84

	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Aust.
<b>Train-kilometres</b>							
('000) (a) (b)							
Suburban passenger . . . . .	24,196	14,483	4,853	3,697	2,384	—	49,613
Country passenger . . . . .	12,052	7,048	4,280	—	932	1,789	26,101
Goods (b) . . . . .	25,411	9,171	24,169	—	7,017	8,449	74,217
<b>Total</b> . . . . .	<b>61,659</b>	<b>30,702</b>	<b>33,303</b>	<b>3,697</b>	<b>10,333</b>	<b>10,238</b>	<b>149,932</b>
<b>Passenger journeys</b>							
('000) (c) —							
Suburban . . . . .	198,065	80,184	35,883	69,680	8,754	—	392,566
Country (d) . . . . .	4,188	4,415	1,769	—	211	357	10,940
<b>Total</b> . . . . .	<b>202,253</b>	<b>84,599</b>	<b>37,652</b>	<b>69,680</b>	<b>8,965</b>	<b>357</b>	<b>403,506</b>
<b>Freight—</b>							
Tonnes carried—							
('000) (d)							
Net tonne-kilometres—							
(million) (e) . . . . .	11,130.8	3,110.8	15,390.9	—	3,903.4	5,911.9	39,447.8

(a) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one kilometre for revenue purposes. (b) Includes mixed train-kilometres. (c) Based on ticket sales making allowances for periodical tickets. Tickets sold at concession rates are counted as full journeys. (d) Inter-system traffic is included in the total for each system over which it passes. (e) One tonne carried one kilometre.

GOVERNMENT RAILWAYS: ROLLING STOCK(a) INCLUDED IN CAPITAL ACCOUNT  
(Number)

System and date	Locomotives				Coaching stock	Goods stock	Service stock
	Diesel- electric	Electric	Other(b)	Total			
<b>30 June 1984—</b>							
New South Wales . . . . .	541	72	38	651	2,022	10,096	1,267
Victoria . . . . .	267	28	11	306	1,289	11,144	1,080
Queensland . . . . .	627	—	4	631	1,307	22,383	2,571
South Australia . . . . .	—	—	4	4	197	12	209
Western Australia . . . . .	196	—	2	198	131	9,117	480
Australian National . . . . .	285	—	3	288	193	9,414	1,303
<b>Australia</b> . . . . .	<b>1,916</b>	<b>100</b>	<b>62</b>	<b>2,078</b>	<b>5,139</b>	<b>62,166</b>	<b>6,910</b>
<b>30 June—</b>							
1983 . . . . .	1,701	81	215	1,997	6,514	62,154	6,752
1982 . . . . .	1,678	80	223	1,981	5,063	65,222	7,039
1981 . . . . .	1,722	82	193	1,997	5,036	66,386	7,201
1980 . . . . .	1,727	81	185	1,993	5,121	67,685	7,228
1979 . . . . .	1,695	74	203	1,972	5,055	67,163	7,192

(a) Excludes jointly-owned stock. (b) Includes non-passenger-carrying diesel power vans and steam locomotives.

GOVERNMENT RAILWAYS: TRAIN-KILOMETRES (a)  
(\*000 kilometres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Aust.
1978-79 . . . . .	55,622	30,856	32,100	3,957	12,068	12,918	147,520
1979-80 . . . . .	59,356	30,795	32,589	3,977	11,759	12,392	150,868
1980-81 . . . . .	58,089	30,615	31,282	3,879	10,891	12,376	147,132
1981-82 . . . . .	59,960	31,136	32,696	3,921	10,681	12,089	150,482
1982-83 . . . . .	61,507	30,166	30,885	3,894	10,560	10,795	147,806
1983-84 . . . . .	61,659	30,702	33,303	3,697	10,333	10,238	149,932

(a) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one kilometre for revenue purposes

**GOVERNMENT RAILWAYS: FREIGHT CARRIED(a), SYSTEMS**  
(<sup>'000 tonnes</sup>)

<i>Commodity and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>W.A.</i>	<i>Australian National</i>	<i>Aust.</i>
1983-84						
Food and live animals . . . . .	6,274	3,849	4,985	3,622	1,784	20,514
Beverages and tobacco . . . . .	47	106	74	36	—	263
Crude materials (inedible excl. fuels)	2,922	931	2,951	11,217	2,505	20,526
Mineral fuels, lubricants . . . . .	31,199	997	41,973	2,516	1,273	77,958
Animal and vegetable oils, fats, waxes	—	—	1	—	—	1
Chemical products n.e.c. . . . .	136	408	206	987	—	1,737
Manufactured goods . . . . .	2,693	2,115	1,379	67	1,192	7,446
Machinery and transport equipment . . . . .	56	139	68	4	—	267
Miscellaneous . . . . .	3,267	1,941	1,513	1,421	5,329	13,471
<b>Total . . . . .</b>	<b>46,594</b>	<b>10,486</b>	<b>53,150</b>	<b>19,870</b>	<b>12,083</b>	<b>142,183</b>
1982-83 . . . . .	41,350	8,570	43,706	19,791	10,676	124,093
1981-82 . . . . .	40,393	11,623	43,659	19,776	11,882	127,333
1980-81 . . . . .	40,440	12,721	41,504	20,271	12,345	127,281
1979-80 . . . . .	39,685	13,454	38,440	21,937	12,704	126,220
1978-79 . . . . .	33,482	11,190	36,542	19,288	10,623	111,125

(a) Inter-system traffic is included in the total for each system over which it passes.

**GOVERNMENT RAILWAYS: FREIGHT NET TONNE-KILOMETRES, SYSTEMS**  
(Million)

<i>Commodity and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>W.A.</i>	<i>Australian National</i>	<i>Aust.</i>
1983-84						
Food and live animals . . . . .	2,698.7	1,075.7	1,670.2	1,005.5	n.a.	n.a.
Beverages and tobacco . . . . .	26.0	28.5	62.7	11.6	n.a.	n.a.
Crude materials (inedible excl. fuels)	623.6	162.9	1,032.9	1,183.0	n.a.	n.a.
Mineral fuels, lubricants . . . . .	3,625.7	271.7	10,893.6	536.4	n.a.	n.a.
Animal and vegetable oils, fats, waxes	—	—	0.7	—	n.a.	n.a.
Chemical products n.e.c. . . . .	130.8	111.3	145.0	235.7	n.a.	n.a.
Manufactured goods . . . . .	1,623.6	675.1	673.7	34.5	n.a.	n.a.
Machinery and transport equipment . . . . .	59.7	32.0	36.2	2.3	n.a.	n.a.
Miscellaneous . . . . .	2,342.7	753.6	876.0	894.5	n.a.	n.a.
<b>Total . . . . .</b>	<b>11,130.8</b>	<b>3,110.8</b>	<b>15,390.9</b>	<b>3,903.4</b>	<b>5,911.9</b>	<b>39,447.8</b>
1982-83 . . . . .	9,116.6	2,467.9	13,176.8	4,384.4	5,347.8	34,493.5
1981-82 . . . . .	10,704.9	3,426.7	13,079.1	4,389.8	5,731.3	37,331.8
1980-81 . . . . .	10,543.4	3,703.7	11,981.7	4,488.6	5,750.9	36,468.3
1979-80 . . . . .	10,664.9	3,887.8	11,464.6	4,730.7	5,618.2	36,366.2
1978-79 . . . . .	8,776.7	3,145.3	10,925.2	4,178.8	5,029.5	32,055.5

**GOVERNMENT RAILWAYS: FREIGHT EARNINGS, SYSTEMS**  
(<sup>\$,000</sup>)

<i>Commodity and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>W.A.</i>	<i>Australian National</i>	<i>Aust.</i>
1983-84						
Food and live animals . . . . .	n.a.	63,901	70,839	n.a.	22,678	n.a.
Beverages and tobacco . . . . .	n.a.	2,207	2,742	n.a.	—	n.a.
Crude materials (inedible excl. fuels)	n.a.	7,768	38,272	n.a.	22,362	n.a.
Mineral fuels, lubricants . . . . .	n.a.	15,403	474,702	n.a.	6,650	n.a.
Animal and vegetable oils, fats, waxes	n.a.	—	32	n.a.	—	n.a.
Chemical products n.e.c. . . . .	n.a.	5,216	5,452	n.a.	—	n.a.
Manufactured goods . . . . .	n.a.	29,442	35,323	n.a.	20,006	n.a.
Machinery and transport equipment . . . . .	n.a.	3,958	4,622	n.a.	—	n.a.
Miscellaneous . . . . .	n.a.	32,946	37,378	n.a.	120,527	n.a.
<b>Total . . . . .</b>	<b>559,876</b>	<b>160,841</b>	<b>669,362</b>	<b>180,439</b>	<b>192,223</b>	<b>1,762,741</b>
1982-83 . . . . .	452,626	108,803	508,223	183,632	161,480	1,414,764
1981-82 . . . . .	431,157	137,676	481,193	175,054	165,214	1,390,294
1980-81 . . . . .	364,406	140,187	383,695	148,422	150,205	1,186,915
1979-80 . . . . .	331,185	131,048	324,170	143,299	131,514	1,061,216
1978-79 . . . . .	252,300	101,815	284,699	128,172	108,109	875,095

**GOVERNMENT RAILWAYS: GROSS EARNINGS, WORKING EXPENSES, AND NET EARNINGS, SYSTEMS**  
(\$,000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian	
						National	Aust.
<b>GROSS EARNINGS</b>							
1978-79	379,033	192,656	310,418	24,550	154,597	131,829	1,193,083
1979-80	495,833	230,549	352,700	26,943	174,258	157,971	1,438,254
1980-81	559,645	256,177	416,796	33,655	180,529	181,353	1,628,155
1981-82	663,216	260,049	520,265	37,714	211,385	195,267	1,887,896
1982-83	694,819	247,945	549,859	41,908	223,925	193,854	1,952,310
1983-84	823,055	305,283	717,956	50,277	(a)228,339	227,063	2,351,973
<b>WORKING EXPENSES</b>							
				(b)		(b)	
1978-79	679,999	347,802	365,070	71,043	159,737	204,738	1,828,389
1979-80	757,555	392,586	422,503	74,391	180,280	222,799	2,050,114
1980-81	870,378	447,761	486,126	84,998	193,166	244,043	2,326,472
1981-82	1,063,725	509,196	588,051	100,000	217,961	268,001	2,746,934
1982-83	1,157,486	625,848	664,548	116,884	235,211	300,410	3,100,387
1983-84	1,234,053	717,447	725,049	126,127	246,552	325,170	3,374,398

For footnotes see end of table

<b>NET EARNINGS(c)</b>							
1978-79	-300,966	-155,147	-54,652	-46,493	-5,141	-72,909	-635,308
1979-80	-261,722	-162,037	-69,803	-47,448	-6,022	-64,828	-611,860
1980-81	-310,734	-191,585	-69,331	-51,343	-12,637	-62,690	-698,320
1981-82	-400,509	-249,147	-67,786	-62,286	-6,576	-72,734	-859,038
1982-83	-462,667	-377,903	-114,689	-74,976	-11,286	-106,556	-1,148,077
1983-84	-410,998	-412,164	-7,093	-75,850	-18,213	-98,107	-1,022,425

(a) Includes road motor finances. (b) Includes provision of reserves for depreciation. (c) Excess of gross earnings over working expenses as shown in this table.

**GOVERNMENT RAILWAYS: WORKING EXPENSES, SYSTEMS, 1983-84**  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian	
						National	Aust.
Maintenance of way and works	179,216	74,114	191,231	n.a.	53,332	n.a.	n.a.
Motive power(a)	437,232	110,880	303,681	n.a.	59,218	n.a.	n.a.
Traffic	263,722	267,746	167,072	n.a.	89,947	n.a.	n.a.
Other charges	353,883	264,707	63,065	n.a.	44,055	n.a.	n.a.
<b>Total</b>	<b>1,234,053</b>	<b>717,447</b>	<b>725,049</b>	<b>(b)126,127</b>	<b>246,552</b>	<b>325,170</b>	<b>3,374,398</b>

(a) Includes maintenance of rolling stock. (b) Includes provision of reserves for depreciation.

**GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT, SYSTEMS, 30 JUNE 1984**  
(\$'000)

System	Net earnings		Plus grants and other earnings payable to railways			Less other expenses charged to railways					Surplus or deficit (-)
	of gross earnings over working expenses	- excess	State Government grants	Road motor earnings	Other	Total	Interest and ex-change	Sinking fund	Road motor expenses		
									(a)	Other	
New South Wales	-410,998	(b)16,050	..	172,910	188,960	81,945	15,055	..	75,910	172,910	-394,948
Victoria	-412,164	309,665	-	-	309,665	38,658	-	-	-	38,658	-141,157
Queensland	-7,093	-	-	..	-	108,648	-	-	(d)500	109,148	-116,241
South Australia	-75,850	68,800	-	2,575	71,375	-	-	-	12,429	12,429	-16,904
Western Australia	-18,213	-	..	-	-	35,988	-	..	-	35,988	-54,201
Australian National	-98,107	89,000	-	3,894	92,894	-	-	-	26,286	26,286	-31,499
<b>Australia</b>	<b>-1,022,425</b>	<b>483,515</b>	<b>-</b>	<b>179,379</b>	<b>662,894</b>	<b>265,239</b>	<b>15,055</b>	<b>-</b>	<b>115,125</b>	<b>395,419</b>	<b>-754,950</b>

(a) Includes interest and exchange. (b) Grants to meet losses on country developmental lines, and the employer liability to the Government Railways Superannuation Account. (c) Depreciation. (d) Demolished assets written off.

**GOVERNMENT RAILWAYS: NUMBER OF EMPLOYEES (AT 30 JUNE) AND SALARIES AND WAGES PAID, 1983-84**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(a)</i>	<i>Australian</i>		<i>Aust.</i>
					<i>W.A. National(b)</i>		
Males . . . . .	37,691	19,548	24,755	3,298	7,492	8,819	101,603
Females . . . . .	3,060	1,299	1,024	236	331	460	6,410
<b>Total Staff . . . . .</b>	<b>40,751</b>	<b>20,847</b>	<b>25,779</b>	<b>3,534</b>	<b>7,823</b>	<b>9,279</b>	<b>108,013</b>
Salaries and wages paid \$'000 . . . . .	868,453	449,291	472,745	53,666	145,555	206,519	2,196,229

(a) Includes staff made available to the State Transport Authority by A.N. (b) Excludes staff made available to the South Australian STA.

### Non-government railways

The Australian non-government railways covered in this section are those which operate outside industrial estates, harbour precincts, mines and quarries with a route distance exceeding two kilometres.

The figures in the following table have been compiled from information supplied to the Department of Transport by the various railway operators. All operators provided details of tonnes carried and most provided details of tonne-kilometres performed. In a few cases the tonne-kilometre figures have been estimated by the Department of Transport using the advised average length of haul.

**TRAFFIC TASK PERFORMED BY AUSTRALIAN NON-GOVERNMENT RAILWAYS 1978-79 TO 1983-84**

<i>Year</i>	<i>Iron ore railways</i>	<i>Sugar tramways</i>	<i>Other non-government railways(a)</i>	<i>Total non-government railways(a)</i>
<b>TONNES CARRIED (million)</b>				
1978-79 . . . . .	79.5	18.6	19.6	117.7
1979-80 . . . . .	88.3	18.3	20.6	127.2
1980-81 . . . . .	88.5	20.6	19.5	128.6
1981-82 . . . . .	83.0	21.6	20.9	125.6
1982-83 . . . . .	78.2	20.9	15.1	114.1
1983-84 . . . . .	71.5	21.6	17.9	111.0
<b>TONNE-KILOMETRES (million)</b>				
1978-79 . . . . .	24,930	299	324	25,553
1979-80 . . . . .	27,128	292	345	27,765
1980-81 . . . . .	28,264	351	319	28,934
1981-82 . . . . .	26,668	367	347	27,384
1982-83 . . . . .	24,432	355	257	25,045
1983-84 . . . . .	22,646	366	311	23,324

(a) Includes transfers to and from Government railways.

### TRAM, BUS, AND FERRY SERVICES

#### Systems in operation

*Trams.* At 30 June 1984 tram services were in operation in Melbourne and in Adelaide. Regular tram services ceased to operate in Ballarat on 19 September 1971 and in Bendigo on 16 April 1972. However services are operated in both cities, on an irregular basis, but generally at holiday periods, as a tourist attraction.

In many parts of Australia private lines used for special purposes in connection with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways, and the traffic on them has nothing in common with that of the street tram used for the conveyance of passengers.

*Buses.* Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal bus services which are located in all State capital cities; Canberra, Australian Capital Territory; Newcastle, New South Wales; Rockhampton, Queensland; Eastern Goldfields area, Western Australia; Launceston and Burnie, Tasmania; Darwin, Northern Territory; and for country road services operated by the Victorian Railways, the State Rail Authority of New South Wales, the Western Australian

Government Railways, and the Australian National Railways. Particulars of bus services under the control of private operators for the States of New South Wales, Victoria, Queensland and South Australia are given in the annual publication *Rail, Bus and Air Transport, Australia* (9201.0) for years prior to 1976-77.

*Ferries.* Ferry passenger services are operated in the following States: New South Wales, at Sydney, Newcastle and various other waterways; Western Australia, on the Swan River at Perth; Tasmania, on the Mersey River at Devonport and on the Derwent River at Hobart; and Queensland, on the Brisbane River at Brisbane. Control is exercised by both government authorities and private operators.

### Government and municipal tram and bus services

Because of the development in recent years of the various forms of public road transport under the control of single authorities and the gradual replacement of tram services by bus services, it is not possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations.

#### TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL STATES AND TERRITORIES: 1983-84

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-kilometres at 30 June										
Tram (a)	kilometres	..	n.a.	..	11	..	..	..	..	n.a.
Bus	"	1,117	n.a.	782	968	8,424	519	152	1,372	n.a.
Vehicle-kilometres										
Tram	'000	..	n.a.	..	751	..	..	..	..	n.a.
Bus	"	65,862	n.a.	23,763	38,607	46,724	9,500	1,920	15,493	n.a.
Rolling stock at 30 June										
Tram	number	..	n.a.	..	22	..	..	..	..	n.a.
Bus	"	1,698	n.a.	580	748	973	281	40	377	n.a.
Passenger journeys										
Tram	'000	..	n.a.	..	(b)	..	..	..	..	..
Bus	"	187,675	n.a.	43,924	(b)	47,365	14,538	2,087	23,225	n.a.
Gross revenue (c)										
Tram and bus	\$'000	111,667	n.a.	26,256	(b)	44,696	5,641	616	11,903	n.a.
Working expenses (d)										
Tram and bus	\$'000	194,626	n.a.	46,670	(b)	67,133	16,715	4,382	26,180	n.a.
Net revenue										
Tram and bus	\$'000	-82,960	n.a.	-20,414	(b)	-22,437	-11,074	-3,766	-14,277	n.a.
Employees at 30 June										
Tram and bus	number	6,272	n.a.	1,532	(b)	2,197	557	103	838	n.a.

(a) Gauge 1435 mm throughout. (b) Not separately available. See page 20/16. (c) Excludes government grants. (d) Includes provision of reserves for depreciation, etc., where possible. Minus sign (-) denotes deficit.

#### TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL

		1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
Route-kilometres at 30 June							
Tram	kilometres	231	231	231	231	232	n.a.
Bus	"	12,828	14,173	11,930	13,445	13,553	n.a.
Vehicle kilometres							
Tram	'000	24,967	24,330	24,864	24,836	24,958	n.a.
Bus	"	201,693	203,963	193,324	209,104	212,423	n.a.
Rolling stock at 30 June							
Tram	number	756	759	767	724	713	n.a.
Bus	"	5,070	5,112	4,941	4,973	5,018	n.a.
Passenger journeys							
Tram	'000	(a)101,070	(a)98,889	(a)100,474	(a)103,479	..	n.a.
Bus	"	(a)357,558	(a)356,638	(a)347,133	(a)343,216	(a)(e)325,649	n.a.
Gross revenue (b)							
Tram and bus	\$'000	(a)123,741	(a)143,324	(a)184,596	(a)201,952	(a)225,236	n.a.
Working expenses (c)							
Tram and bus	\$'000	(a)258,644	(a)277,865	(a)337,434	(a)397,394	(a)459,452	n.a.
Net revenue							
Tram and bus	\$'000	(a)-134,902	(a)-134,542	(a)-152,838	(a)-195,441	(a)-232,015	n.a.
Employees at 30 June							
Tram and bus	number	(a)16,547	(a)16,244	(a)13,795	(a)15,195	(a)16,376	n.a.
Accidents							
Tram and bus (d)							
Persons killed	number	(e)27	(a)12	n.a.	n.a.	n.a.	n.a.
Persons injured	"	(a)1,885	(a)1,917	n.a.	n.a.	n.a.	n.a.

(a) Excludes details of metropolitan tram and bus services in South Australia. See page 20/16. (b) Excludes government grants. (c) Includes provision of reserve for depreciation, etc., where possible. (d) Excludes accidents to employees. (e) Excludes details of metropolitan tram and bus services in Victoria.

## MOTOR VEHICLES

Tables in this section include vehicles owned by private individuals, local government authorities, State Governments, and the Commonwealth Government (excluding those belonging to the defence services).

## Survey of motor vehicle usage

A survey was conducted throughout Australia in late 1982 by the Australia Bureau of Statistics for the purpose of gathering information on the usage of motor vehicles. The owners of approximately 59,000 vehicles other than commercial buses and Australian Government owned vehicles were approached for information relating to the usage of their vehicles over the twelve months ended 30 September 1982. The framework from which the sample was drawn was obtained from the motor vehicle registration authorities in all States and territories. The survey was based on respondents' recollection of their usage of the selected vehicles over their period of ownership during the survey year.

The main purpose of the survey was to determine the total distance travelled by vehicles, classified according to area and purpose of travel. Information was also obtained from the survey on: (i) tonne-kilometres; (ii) average load carried; (iii) vehicle usage (i.e. for hire and reward, ancillary or other); (iv) main type of operation; (v) fuel consumption; (vi) occupant-kilometres; and (vii) driver characteristics.

The following table shows, for Australia, total annual kilometres travelled for the twelve months ended 30 September 1982 classified by vehicle type and purpose of travel. The percentage standard errors (S.E.%) indicate the extent to which the estimates can vary by chance because only a sample and not the total vehicle population was enumerated. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors. For example, if an estimate of 3,000 million kilometres has a standard error of 5 per cent (i.e. 150 million kilometres), then there would be approximately two chances in three that a comparable complete collection would give a figure within the range of 2,850 million kilometres to 3,150 million kilometres and about nineteen chances in twenty that the figure would be within the range of 2,700 million kilometres to 3,300 million kilometres.

TOTAL ANNUAL KILOMETRES BY VEHICLE TYPE PURPOSE OF TRAVEL, TWELVE MONTHS ENDED 30 SEPTEMBER 1982

Type of vehicle	Laden business		Unladen business		Total business (a)		To and from work paid and unpaid		Private		Total	
	million kilometres	REL. S.E. (%)	million kilometres	REL. S.E. (%)	million kilometres	REL. S.E. (%)	million kilometres	REL. S.E. (%)	million kilometres	REL. S.E. (%)	million kilometres	REL. S.E. (%)
Cars and station wagons	..	..	..	..	19,469.6	3.3	23,206.8	2.0	53,431.7	1.3	96,108.9	1.0
Motor cycles	..	..	..	..	143.9	9.3	871.0	5.3	1,137.2	5.0	2,152.1	3.8
Utilities and panel vans	6,228.8	7.4	2,672.0	9.2	9,501.7	6.1	3,109.3	8.1	4,338.1	6.3	16,951.2	3.6
Rigid trucks	5,291.5	6.7	2,364.8	5.3	7,656.5	5.8	377.4	6.5	383.3	16.1	8,417.2	5.4
Articulated trucks	2,142.7	1.4	827.4	1.6	2,970.1	1.2	24.4	8.8	5.0	12.7	2,999.5	1.2
Other truck type vehicles	..	..	..	..	229.8	12.1	5.0	28.8	2.3	48.5	237.1	11.8
<b>Total</b>	<b>13,663.0</b>	<b>4.1</b>	<b>5,864.3</b>	<b>4.6</b>	<b>39,971.5</b>	<b>2.4</b>	<b>27,593.9</b>	<b>1.9</b>	<b>59,297.6</b>	<b>1.3</b>	<b>126,866.0</b>	<b>0.9</b>

(a) Includes the total kilometres travelled for business purposes of cars, station wagons, motor cycles and utilities and panel vans predominantly used for private purposes. The dissection of business travel into laden/unladen was not sought for these vehicles.

## Motor vehicles on register

Details of motor vehicles on the register are compiled by up-dating motor vehicles census data from information made available by the various motor vehicles registration authorities in the States and Territories. Censuses of motor vehicles have been conducted in respect of 31 December 1955 and 1962, and 30 September 1971, 1976, 1979 and 1982. At these census dates considerably greater information concerning the particulars shown in the tables following is available. Final detailed results of the 1982 census have been published in separate census publications for each State and Territory and for Australia.

**MOTOR VEHICLE CENSUS: 30 SEPTEMBER 1982 (FINAL)**  
(<sup>'000</sup>)

State or Territory	Motor cars and station wagons	Utilities	Trucks			Other truck type vehicles	Buses	Motor cycles	Total (a)
			Panel vans	Rigid	Articulated				
New South Wales . . . . .	2,070.4	158.4	161.7	155.2	16.1	11.9	15.9	118.5	2,708.1
Victoria . . . . .	1,700.7	118.5	55.2	146.9	11.5	11.4	11.4	71.7	2,127.2
Queensland . . . . .	1,005.3	190.5	77.0	55.1	8.6	4.5	7.3	91.8	1,440.0
South Australia . . . . .	580.4	43.5	28.0	41.5	4.4	5.7	3.6	36.8	744.0
Western Australia . . . . .	561.3	59.0	53.8	59.6	4.3	6.0	4.9	34.6	783.4
Tasmania . . . . .	188.1	21.2	11.9	12.8	1.4	1.7	2.1	5.1	244.3
Northern Territory . . . . .	34.5	12.0	4.3	4.5	0.8	0.2	0.6	4.0	60.9
Australian Capital Territory . . . . .	92.6	4.5	3.4	3.5	0.2	0.6	0.5	4.4	109.7
<b>Australia . . . . .</b>	<b>6,233.4</b>	<b>607.6</b>	<b>395.3</b>	<b>479.0</b>	<b>47.2</b>	<b>42.0</b>	<b>46.2</b>	<b>366.9</b>	<b>8,217.7</b>

(a) Excludes tractors, plant and equipment, caravans and trailers.

**MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE, AUSTRALIA**  
(<sup>'000</sup>)

30 June	Motor cars and station wagons	Utilities, trucks, panel vans, other truck type vehicles and buses	Total (excludes motor cycles)	Motor cycles
1979 . . . . .	5,657.2	1,412.7	7,069.9	288.2
1980 . . . . .	5,800.6	1,462.4	7,262.9	310.3
1981 . . . . .	6,021.0	1,544.3	7,565.3	352.3
1982 . . . . .	6,293.8	1,661.5	7,955.3	390.8
1983 . . . . .	6,469.6	1,718.3	8,187.9	402.0
1984 . . . . .	6,636.2	1,798.2	8,434.4	398.4

**MOTOR VEHICLES(a) ON REGISTER PER 1,000 OF POPULATION, STATES AND TERRITORIES**

30 June	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1978 . . . . .	443.0	482.2	484.6	502.1	543.5	510.3	383.6	431.2	475.1
1979 . . . . .	454.3	494.0	500.2	507.0	555.8	r520.6	r381.8	468.8	r486.9
1980 . . . . .	467.9	487.0	518.8	515.8	563.8	530.7	r373.1	455.2	494.2
1981 . . . . .	480.0	499.6	539.1	522.3	r569.4	r544.1	408.6	464.4	r507.0
1982 . . . . .	499.8	525.1	554.3	532.9	r576.5	r551.5	420.4	r463.8	r525.0
1983r . . . . .	503.7	539.5	565.2	541.1	566.8	562.9	433.9	471.7	532.4
1984 . . . . .	509.9	554.5	574.6	556.2	574.4	571.2	453.6	484.1	542.6

(a) Excludes motor cycles, tractors, plant and equipment, caravans and trailers.

**Registrations of new motor vehicles**

Particulars of registrations of new motor vehicles are shown by type of vehicle in preliminary monthly publications, and by type and make of vehicle in monthly and annual publications of Motor Vehicle Registrations.

In these statistics 'registrations' mean registrations processed by the motor vehicle registration authorities in the States and Territories during the period.

## REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE

State or Territory	Motor cars and station wagons		Panel vans	Trucks		Other truck type vehicles (a)	Buses	Total (excludes motor cycles)	Motor cycles
	Utilities			Rigid	Articulated				
1984-85									
New South Wales . . . . .	166,214	16,418	24,765	12,714	1,342	757	10,773	232,983	15,503
Victoria . . . . .	143,279	7,487	1,767	17,884	843	551	1,030	172,841	9,878
Queensland . . . . .	81,670	16,588	6,408	3,646	519	194	948	109,973	8,534
South Australia . . . . .	45,809	4,103	3,661	3,266	353	195	217	57,604	4,956
Western Australia . . . . .	46,070	4,923	6,902	5,174	318	93	546	64,026	4,310
Tasmania . . . . .	13,840	1,999	1,046	1,256	170	127	134	18,572	991
Northern Territory . . . . .	4,504	2,248	499	202	69	23	82	7,627	1,092
Australian Capital Territory . . . . .	9,507	741	534	280	13	12	117	11,204	615
<b>Australia</b> . . . . .	<b>510,893</b>	<b>54,507</b>	<b>45,582</b>	<b>44,422</b>	<b>3,627</b>	<b>1,952</b>	<b>13,847</b>	<b>674,830</b>	<b>45,879</b>
1983-84 . . . . .	461,018	46,140	(b)46,779	33,396	2,581	1,630	(b)12,169	603,713	46,684
1982-83 . . . . .	453,523	43,682	52,364	31,514	2,426	1,834	4,680	590,023	61,061
1981-82 . . . . .	471,255	52,035	48,009	40,062	3,665	2,218	4,998	622,242	71,691
1980-81 . . . . .	462,487	47,474	37,391	36,485	4,269	1,939	4,170	594,215	70,799
1979-80 . . . . .	451,950	43,826	30,169	33,541	4,282	1,611	3,045	568,424	53,947

(a) Non-freight carrying vehicles. (b) From August 1983 in N.S.W., the body type classification applied by the registration authority for small bus type vehicles changed from panel vans to buses.

## Drivers' and riders' licences

At 30 June 1984, the numbers of licences in force to drive or ride motor vehicles were: New South Wales, 3,337,874; Victoria, 2,369,622; Queensland, 1,800,000 (est.); South Australia, 953,672; Western Australia, 799,769; Tasmania, 254,249; Northern Territory, 101,265; Australian Capital Territory, 151,016.

## ROAD TRAFFIC ACCIDENTS

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a) (ADMISSIONS TO HOSPITALS):  
NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED, 1984

State or Territory	Number of accidents	Per 100,000 of mean population			Per 10,000 motor vehicles registered (b)				
		Persons killed	Persons injured	Number of accidents	Persons killed	Persons injured	Number of accidents	Persons killed	Persons injured
New South Wales . . . . .	8,095	1,037	9,100	149.6	19.2	168.1	28.0	3.6	31.5
Victoria . . . . .	6,965	657	8,264	170.8	16.1	202.6	29.7	2.8	35.3
Queensland . . . . .	3,669	505	4,168	146.3	20.1	166.2	23.9	3.3	21.2
South Australia . . . . .	2,587	232	3,100	191.1	17.1	229.1	32.7	2.9	32.7
Western Australia . . . . .	2,311	221	2,720	167.0	16.0	196.5	27.8	2.7	32.8
Tasmania . . . . .	644	83	776	147.3	19.0	177.5	25.2	3.2	30.3
Northern Territory . . . . .	351	50	420	252.7	36.0	302.4	52.3	7.5	62.7
Australian Capital Territory . . . . .	240	37	247	98.2	15.1	101.1	19.4	3.0	20.0
<b>Australia</b> . . . . .	<b>24,862</b>	<b>2,822</b>	<b>28,795</b>	<b>159.8</b>	<b>18.1</b>	<b>185.1</b>	<b>28.1</b>	<b>3.2</b>	<b>32.6</b>

(a) Accidents reported to the police or other relevant authority which occurred in public thoroughfares and which resulted in death within thirty days or personal injury to the extent that the injured person was admitted to hospital. (b) Number of motor vehicles (excluding tractors, plant and equipment) on register at 30 June 1984.

## ROAD TRAFFIC ACCIDENTS INVOLVING FATALITIES

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
Accidents involving fatalities—									
1979 . . . . .	1,125	750	544	277	257	83	43	24	3,103
1980 . . . . .	1,152	608	508	240	268	96	55	27	2,954
1981 . . . . .	1,130	677	510	196	217	97	63	24	2,914
1982 . . . . .	1,115	631	522	239	203	84	52	26	2,872
1983 . . . . .	877	610	437	235	191	63	45	27	2,485
1984 . . . . .	910	584	448	205	204	77	45	35	2,508
Persons killed—									
1979 . . . . .	1,290	847	613	309	279	93	53	24	3,508
1980 . . . . .	1,303	657	557	269	293	100	63	30	3,272
1981 . . . . .	1,292	766	594	222	238	111	70	29	3,322
1982 . . . . .	1,253	709	602	270	236	96	60	26	3,252
1983 . . . . .	966	664	510	266	203	70	48	28	2,755
1984 . . . . .	1,037	657	505	232	221	83	50	37	2,822



## ROADS

An article dealing with the development of roads in Australia is given in Year Book, No. 60, pages 385-93.

## Summary of roads used for general traffic

*Proclaimed or declared roads.* The table following is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30 June 1984. The central road authority in each State assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance of these roads, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points: availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; the value of the roads as connecting links between centres of population or business; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main roads. The absence of a particular class in any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes (e.g. insufficiency of funds, man-power or materials, construction or maintenance may not keep pace with gazettal of roads, and, therefore, the condition of a road may not match its status.

## PROCLAIMED OR DECLARED ROADS: LENGTHS, STATES, 30 JUNE 1984

(Kilometres)

<i>Class of road</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
State Highways and Freeways . . . . .	10,465	7,552	10,444	—	7,765	1,960	38,186
Trunk roads . . . . .	7,098	—	216	13,413	—	—	20,727
Ordinary main roads . . . . .	18,352	14,847	8,131	—	7,476	1,290	50,096
<i>Total main roads</i> . . . . .	<i>35,915</i>	<i>22,399</i>	<i>18,791</i>	<i>13,413</i>	<i>15,241</i>	<i>3,250</i>	<i>109,009</i>
Secondary roads . . . . .	(a)292	—	13,173	—	8,771	284	22,520
Development roads . . . . .	3,474	—	8,789	—	—	45	12,308
Tourist roads . . . . .	445	840	—	—	—	173	1,458
Other roads. . . . .	2,511	(b)1,013	—	—	—	—	3,524
<i>Total other roads</i> . . . . .	<i>6,722</i>	<i>1,853</i>	<i>21,962</i>	<i>—</i>	<i>8,771</i>	<i>502</i>	<i>39,810</i>
<b>Grand total</b> . . . . .	<b>42,637</b>	<b>24,252</b>	<b>40,753</b>	<b>13,413</b>	<b>24,012</b>	<b>3,752</b>	<b>148,819</b>

(a) Metropolitan only. (b) Forest roads.

*Total roads.* The following table represents an attempt to classify all the roads open for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

## ALL ROADS OPEN FOR GENERAL TRAFFIC LENGTHS, STATES AND TERRITORIES, 30 JUNE 1984

(Kilometres)

<i>Surface of roads</i>	<i>N.S.W.(a)(b)</i>	<i>Vic.(c)</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.(d)</i>	<i>Tas.</i>	<i>N.T.(e)</i>	<i>A.C.T.</i>	<i>Total (a)</i>
Bitumen or concrete . . . . .	73,674	64,728	51,563	22,322	38,634	8,354	5,289	2,122	266,686
Gravel, crushed stone or other improved surface . . . . .	64,877	47,397	37,319	—	37,335	8,487	5,350	97	200,862
Formed only . . . . .	36,670	23,415	54,857	80,564	43,089	369	4,814	—	243,778
Cleared only . . . . .	20,300	21,771	20,442	—	21,273	4,988	4,627	—	93,401
<b>Total(f)</b> . . . . .	<b>195,548</b>	<b>157,311</b>	<b>164,181</b>	<b>102,886</b>	<b>140,330</b>	<b>22,198</b>	<b>20,080</b>	<b>2,219</b>	<b>804,753</b>

(a) Excludes road designated but not trafficable. Excludes Lord Howe Island and the unincorporated area of the Western Division. (b) Figures as at 31 December 1983. (c) Excludes roads coming under the responsibility of the State Electricity Commission (38 km), Melbourne and Metropolitan Board of Works (32 km) and Forests Commission (39,656 km). (d) Excludes Forests Department roads. (e) Excludes roads in towns and Local Government Areas. (f) Rounding of figures by N.S.W. councils affects total for N.S.W. and Australia.

### **National Association of Australian State Road Authorities**

The National Association of Australian State Road Authorities (NAASRA) was established in 1934. The present member authorities are: Department of Main Roads, New South Wales; Road Construction Authority, Victoria; Main Roads Department, Queensland; Highways Department, South Australia; Main Roads Department, Western Australia; Department of Main Roads, Tasmania; Northern Territory Department of Transport and Works; Commonwealth Department of Housing and Construction.

The Association's objectives are to provide a central organisation where, by co-operative effort, a uniform approach to the improvement, planning and development of the Australian road system can be achieved. National standards for road and bridge construction and maintenance and improved administrative and financial control methods are developed by committees of experienced staff from the authorities, with secretarial services provided by a small staff located in Sydney.

This Secretariat arranges publication of the policies and standards which are widely used by road authorities, local government and universities; co-operates with the Standards Association of Australia on the preparation of national codes of practice; and acts as an Australian centre for contact with overseas road bodies and for the circulation of standards published by them.

The Association is a member of the Permanent International Association of Road Congresses (PIARC) and of the Road Engineering Association of Asia and Australasia (REAAA).

### **Australian Road Research Board**

The Australian Road Research Board (ARRB) is a non-profit-making company founded in 1960 by the National Association of Australian State Road Authorities (NAASRA), and now located at Vermont in Victoria. It is financed by Federal and State Government Road Authorities whose permanent heads make up ARRB's Board of Directors. The Executive Director, a full-time employee and member of the Board, is responsible for administering the Director's policies.

The ARRB regularly undertakes and sponsors road and road transport research over a comprehensive range of subjects and disseminates results to appropriate organisations, engineers and scientists involved in the design, location, construction, upkeep and use of roads. In selecting and monitoring its research projects, and developing a longer term research plan, ARRB is assisted by a senior advisory Steering Committee and four Technical Committees in the areas of Road Technology, Road Users, Road Transport and Local Government, the members of which are experts drawn from government, commerce and education.

ARRB disseminates road research information through its major biennial conferences and regular symposia, seminars and workshops and through its publications which include the *ARRB Conference Proceedings*, a quarterly journal *Australian Road Research*, the *Source Book for Australian Roads*, symposium and workshop papers and various reports and technical manuals arising out of its many research projects. ARRB also maintains a unique library of road literature and operates a computer-based information service which abstracts and indexes Australian road literature in the quarterly *Australian Road Index (ARI)*, and research projects in the annual *Australian Road Research in Progress (ARRIP)*. The machine-readable version of *ARI* and *ARRIP*, called Australian Road Research Documentation (ARRD), is available on AUSINET, the Australian Information Network.

ARRB acts as the Australian member of the Organisation for Economic Co-operation and Development's International Road Research Documentation (IRRD) system, contributing information on Australian literature and projects. IRRD information from all member countries is available to Australians through ARRB's computer search services. ARRB also maintains close contacts with road research organisations in other countries.

## **AIR TRANSPORT**

### **Department of Aviation**

The Commonwealth imposes safety and operational controls on the Australian aviation industry under the *Commonwealth Air Navigation Act 1920* and regulations made under the Act, which are administered by the Department of Aviation. In accordance with the Act and regulations, the Department determines the rules of the air and general conditions of flight over Australian territory, classifies and licenses air services, approves timetables, negotiates international air transport agreements, and approves international fares and freight rates.

The Department determines airworthiness requirements for civil aircraft and issues certificates of airworthiness, and licenses aircraft operating crews and flying training schools. It is responsible for the operation of the Australian air traffic control and air navigation network, provides (in conjunction with the Bureau of Meteorology) a national weather information service for aircraft, and co-ordinates search and rescue operations. It licenses all civil aerodromes and also operates Commonwealth owned civil aerodromes and related facilities.

In accordance with the *Air Navigation (Charges) Act 1952*, administered by the Department of Aviation, the Commonwealth currently imposes charges on aircraft operators for the use of the aerodromes, air route facilities, meteorological services, and search and rescue services it maintains and operates.

### International Activity

*International Organisations.* Australia is one of the 156 (as at 30 June 1985) members of the International Civil Aviation Organisation (ICAO). Australia has continued its membership of the (governing) Council since ICAO was established in 1947. Australia is also a member of the 15 man Air Navigation Commission which is responsible for drawing up international standards and procedures for the safety, regularity and efficiency of air navigation. In addition, Australia participates in the Commonwealth Air Transport Council, the South Pacific Regional Civil Aviation Council and the Airport Operators Council International.

*International agreements.* Australia had air service agreements in force with twenty-eight countries at 30 June 1985. Under these agreements Australia is granted rights to operate services between Australia to and through the countries in question; these rights are exercised by Australia's international airline Qantas. In return, the designated airlines of the other countries which are partners to these agreements are granted traffic rights in Australia. Australia also had air service arrangements granting traffic rights with five other countries at 30 June 1985.

*International air services.* At 30 June 1985, twenty-nine overseas international airlines were operating regular scheduled air services to Australia. The carriers (and contracting states) were: Air Caledonie International (France), Air India (India), Air Nauru (Nauru), Air New Zealand Ltd International (New Zealand), Air Niugini (Papua New Guinea), Air Pacific (Fiji), Air Vanuatu (Vanuatu), Alitalia (Italy), British Airways (U.K.), CAAC (Peoples Republic of China), CP Air (Canada), Cathay Pacific Airways (U.K.), Continental Airlines Inc. (U.S.A.), Flying Tiger Line Inc. (U.S.A.), Garuda Indonesian Airways (Indonesia), JAL (Japan), JAT (Yugoslavia), KLM-Royal Dutch Airlines (Netherlands), Lufthansa German Airlines (Federal Republic of Germany), Malaysian Airline System (Malaysia), Olympic Airways (Greece), Pan American World Airways Inc. (U.S.A.), Philippine Airlines (Philippines), Polynesian Airlines Ltd (Western Samoa), Royal Brunei Airlines (Brunei), Singapore Airlines Ltd (Singapore), South African Airways (South Africa), Thai Airways International (Thailand), and Union de Transports Aeriens (France). Qantas, Australia's international airline, operates a fleet of 24 Boeing 747 jet aircraft. All shares in Qantas Airways Limited are owned by the Commonwealth Government.

*International operations.* The table following shows particulars of international airline traffic during 1984-85 moving into and out of an area which embraces Australia and Norfolk Island. These figures do not include traffic between Australia and Norfolk Island.

**AIR TRANSPORT: SCHEDULED INTERNATIONAL AIRLINE TRAFFIC TO AND FROM AUSTRALIA(a), 1984-85p**

Type of traffic	Number of flights(b)(c)	Passengers	Freight tonnes	Mail tonnes
Traffic to Australia—				
Qantas Airways Limited . . . . .	4,820	1,096,239	46,764	1,130
Other airlines . . . . .	6,345	1,393,822	75,433	6,826
<b>All airlines . . . . .</b>	<b>11,165</b>	<b>2,490,061</b>	<b>122,197</b>	<b>7,956</b>
Traffic from Australia—				
Qantas Airways Limited . . . . .	4,686	1,044,710	33,972	3,326
Other airlines . . . . .	6,248	1,372,411	65,394	1,801
<b>All airlines . . . . .</b>	<b>10,934</b>	<b>2,417,121</b>	<b>99,366</b>	<b>5,127</b>

(a) Australia and Norfolk Island. (b) Includes Qantas flights using aircraft leased from other airlines. (c) Difference between in/out numbers arises because some outward flights are operated as non-scheduled, and thus not counted in above table.

Statistics covering the operations of Australia's regular overseas services are shown in the following table. These operations include all stages of Qantas flights linking Australia with overseas countries.

**AIR TRANSPORT: OPERATIONS OF AUSTRALIA'S SCHEDULED OVERSEAS SERVICES**

		1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 <sup>p</sup>
Hours flown . . . . .	number	74,879	73,679	77,910	82,409	83,551	89,952
Kilometres flown . . . . .	'000	59,109	58,188	61,052	64,898	65,670	71,046
Passengers—							
Embarkations . . . . .	number	1,933,580	1,883,477	2,020,107	2,101,788	2,189,669	2,449,596
Passenger-kilometres . . . . .	'000	16,296,416	14,876,509	14,818,491	14,477,756	15,247,801	16,858,595
Freight—							
Tonnes uplifted . . . . .	tonnes	52,326	53,753	66,036	75,375	84,844	90,357
Tonne-kilometres . . . . .	'000	412,518	418,849	479,996	485,549	563,268	637,590
Mail—							
Tonnes uplifted . . . . .	tonnes	3,878	3,919	4,344	4,219	4,410	4,744
Tonne-kilometres . . . . .	'000	36,226	36,581	39,244	40,058	40,324	43,231

The air cargo statistics set out in the following table have been compiled from information contained in import and export documents submitted by importers and exporters, or their agents to the Australian Customs Service as required by the *Customs Act 1901*.

**AIR CARGO BY TRADE AREA: 1983-84**

Trade area	Inward cargo		Outward cargo	
	Gross weight (tonnes)	Value (\$'000)	Gross weight (tonnes)	Value (\$'000)
Europe . . . . .	28,111	1,310,965	3,616	523,187
East Asia . . . . .	6,807	169,631	6,815	305,674
Japan . . . . .	7,491	439,509	3,508	117,112
N. America—E. Coast . . . . .	12,090	786,725	1,540	137,721
N. America—W. Coast . . . . .	10,436	841,665	3,639	208,576
Central America . . . . .	69	9,182	117	3,434
S. America—E. Coast . . . . .	242	17,873	44	2,587
S. America—W. Coast . . . . .	137	7,228	15	894
West Africa . . . . .	2	214	19	552
South and East Africa . . . . .	262	8,786	593	18,666
Red Sea . . . . .	1	106	500	3,008
Persian Gulf . . . . .	38	13,680	12,265	39,456
West India . . . . .	610	22,563	191	3,853
East India . . . . .	1,218	23,381	57	2,207
South East Asia . . . . .	4,216	156,911	21,300	184,588
New Zealand . . . . .	29,725	307,379	15,599	336,512
Papua New Guinea . . . . .	230	22,238	2,672	59,546
Central Pacific . . . . .	234	26,016	1,938	25,710
French Pacific . . . . .	22	1,851	1,776	10,377
Pacific Islands . . . . .	51	3,831	143	4,432
Trade area not specified . . . . .	14	1,665	9,051	84,936
Other . . . . .	—	—	—	—
<b>Total . . . . .</b>	<b>102,006</b>	<b>4,171,397</b>	<b>85,397</b>	<b>2,073,029</b>

**Domestic activity**

Both the Commonwealth and the State Governments may exercise controls over intrastate domestic aviation by virtue of their respective powers under the Constitution. The States of New South Wales, Queensland, Western Australia and Tasmania, and the Northern Territory, license air services within their borders, having regard to public interest and other considerations; in some cases approval of intrastate air fares is also required. Victoria and South Australia choose not to regulate air services and within these States, Commonwealth requirements only must be satisfied to conduct air services. (The Commonwealth alone regulates interstate aviation and negotiates the provision of international air services with the Governments of other countries.)

*Trunk route services.* The Commonwealth regulates domestic air transport on economic grounds in Australia through arrangements commonly known as the 'two-airline policy' which have existed in various forms for more than thirty years. Under the policy the operation of regular passenger air services over the main domestic or 'trunk' routes is restricted generally to the Commonwealth-owned Australian National Airlines Commission, trading as Trans-Australia Airlines (TAA) and the privately owned Ansett (a division of Ansett Transport Industries (Operations) Pty Ltd, a wholly owned subsidiary of Ansett Transport Industries Ltd). The premises underlying the policy have been that the Australian domestic trunk route network could support no more than two major operators and that any move towards a private or public monopoly was not in the public interest.

As the Commonwealth is generally constrained to licensing domestic air services on operational grounds only, it maintains the policy essentially by using the Customs (Prohibited Imports) Regulations to restrict other operators' access to aircraft which could be used to compete with TAA and Ansett Transport Industries over the trunk routes. The policy in its present form is based on legislation passed by Parliament in 1981—namely the *Airlines Agreement Act 1981*, the associated *Airlines Equipment Amendment Act 1981* and the *Independent Air Fares Committee Act 1981*.

The *Airlines Agreement Act 1981* approved the 1981 Airlines Agreement, the parties to which are the Commonwealth, TAA and Ansett, on behalf of the Commonwealth. The Agreement provides that the Commonwealth or Ansett may give three years notice of termination no earlier than 1987. Accordingly, the Agreement and, therefore, the two-airline policy in its present form, will remain in force at least up until 1990, unless otherwise agreed by the parties.

The Commonwealth's present arrangements governing domestic air services, including specifically the two-airline policy, are the subject of the independent review of Economic Regulation of Domestic Aviation, headed by Mr Thomas E. May, the establishment of which was announced by the Minister for Aviation in January 1985. The review is to report to the Minister in time for the Government to consider its position by January 1987.

At 30 June 1985, the Ansett fleet included 5 Boeing 767s, 13 Boeing 727s, 12 Boeing 737s and 4 Fokker F27 Friendships. At the same date, Trans-Australia Airlines operated a fleet of 13 Boeing 727s, 4 Airbus A300s and 9 McDonnell-Douglas DC9s and 3 Fokker F27 Friendships. Both Ansett and TAA recently announced major fleet re-equipment programmes.

*Regional services.* In addition to their competitive trunk route services, both Ansett and Trans-Australia Airlines operate limited domestic regional services on non-competitive routes. There are also a number of smaller regional airlines so-called because in general they provide regular passenger air services in specific geographic regions.

However, in recent years East-West Airlines has considerably extended its network beyond its traditional services within New South Wales. Aside from East-West Airlines, these regional airlines are either owned by TAA (Air Queensland) or are in the Ansett group (Ansett of Western Australia, Airlines of New South Wales, Airlines of Northern Australia and Airlines of South Australia).

The predominant aircraft types used by regional airlines are the Fokker F28 turbo-jet and the Fokker F27 turbo-prop. East-West Airlines and Air New South Wales use both types; Ansett of Western Australia uses the F28 and has recently acquired BAe 146 turbo-jets; Airlines of Northern Australia, Airlines of South Australia and Air Queensland use only the F27.

*Commuter services.* Commuter operators are, in general, required to hold a supplementary airline licence which authorises regular passenger air services using aircraft with capacity to carry no more than 38 passengers or a 4,200 kg maximum payload. Like regional airlines they generally operate over routes other than trunk routes. However, they use smaller aircraft than the airlines and often operate into centres not served by an airline. At 30 June 1985, there were 44 operators of commuter services in Australia serving some 260 centres.

The aircraft types currently used by commuter operators are predominantly those in the 6-10 seat category, such as the Piper PA31 and PA32 and Cessna 310, 402, and 404 series. Many also operate the larger DHC6 Twin Otter, Beechcraft Super King Air, Swearingen Metroliner and Embraer Bandeirante. Recently developed commuter aircraft such as the British Aerospace Jetstream 31 and Shorts 330 and 360 are also used. During 1984-85, commuter operators carried 955,141 passengers and flew some 41 million kilometres.

*General aviation.* In addition to trunk route, regional and commuter services, there is a wide range of other activities undertaken by the aviation industry. Charter operations involve the use of aircraft in operations for the carriage of passengers and/or cargo for hire or

reward which are not both scheduled and available to the public. More than 600 operators in Australia hold charter licences.

Aerial work and private operations do not involve the commercial transport of passengers and/or cargo. Aerial work involves the use of aircraft in operations such as aerial survey, aerial agriculture, advertising and flying training. Holders of charter licences generally hold aerial work licences as well. Private operations include the use of aircraft for the personal transportation of the owner and the carriage of persons or goods without a charge being made for the carriage. In certain circumstances some operations which would otherwise be classified as aerial work may be considered private. No air service licence is required to conduct private operations.

*Cargo services.* Cargo, i.e. freight and mail, is also carried on the regular public passenger services operated by TAA, Ansett, regional airlines and commuters, as well as on charter services. Also TAA and Ansett each has a dedicated B727 cargo aircraft involved in regular interstate services. The Interstate Parcel Express Company (Australia) Pty Ltd, trading as IPEC Aviation, operates cargo airline services using three Argosy aircraft and domestic cargo charter services using a DC9 aircraft, also over interstate routes.

*Scheduled domestic airlines services.* Statistics of all regular domestic airline services are set out in the following table.

**AIR TRANSPORT: OPERATIONS OF SCHEDULED DOMESTIC SERVICES, AUSTRALIA (a)**

		1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 <sup>p</sup>
Hours flown . . . . .	number	284,381	277,199	268,339	245,567	242,075	250,779
Kilometres flown . . . . .	'000	138,185	137,264	136,769	127,952	126,087	n.a.
<b>Passengers—</b>							
Embarkations . . . . .	number	11,504,957	11,380,798	11,396,510	10,332,934	10,597,651	11,359,700
Passenger-kilometres . . . . .	'000	9,485,635	9,747,272	10,155,379	9,327,206	9,684,589	10,413,381
<b>Freight—</b>							
Tonnes uplifted . . . . .	tonnes	129,775	124,955	136,250	141,853	149,879	153,181
Tonne-kilometres . . . . .	'000	109,603	107,851	117,936	124,796	137,819	139,597
<b>Mail—</b>							
Tonnes uplifted . . . . .	tonnes	15,053	17,302	16,841	16,767	17,571	18,467
Tonne-kilometres . . . . .	'000	14,206	16,397	16,515	17,167	17,621	18,603

(a) Includes flights of all Australian-owned airlines, with the exception of those of Qantas Airways Limited, between airports located within Australia. The domestic carrier, East-West Airlines, commenced services between Sydney and Norfolk Island in March 1977 and particulars of these flights are included from that time.

*Internal airline passenger embarkation and disembarkation.* The statistics set out in the next table have been compiled by aggregating all internal airline passenger traffic loaded and unloaded at each airport. They include passengers on flights between Australia and Norfolk Island. At ports where through-passengers transfer between flights, such passengers are counted as embarking as well as disembarking passengers.

**SCHEDULED DOMESTIC AIRLINES PASSENGER UPLIFTS AND DISCHARGES AT PRINCIPAL AUSTRALIAN AIRPORTS**

Airport	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 <sup>p</sup>
Sydney . . . . .	5,961,807	5,858,143	5,917,874	5,338,944	5,501,492	5,917,925
Melbourne . . . . .	5,104,448	5,046,031	5,038,634	4,500,234	4,550,568	4,851,644
Brisbane . . . . .	2,521,119	2,636,552	2,758,922	2,518,841	2,554,622	2,688,006
Adelaide . . . . .	1,931,395	1,930,219	1,852,906	1,635,544	1,684,281	1,761,141
Perth . . . . .	910,637	929,949	1,017,173	995,987	1,049,567	1,125,587
Canberra . . . . .	967,803	872,223	820,943	786,449	838,175	931,734
Coolangatta . . . . .	570,137	632,791	648,384	553,886	567,623	633,320
Hobart . . . . .	473,567	474,115	475,127	433,910	448,549	485,523
Cairns . . . . .	387,095	426,064	442,524	387,895	404,168	426,818
Townsville . . . . .	378,884	384,587	396,622	377,186	388,752	410,903
Launceston . . . . .	390,215	380,512	376,536	356,261	352,494	390,269
Darwin . . . . .	278,669	290,789	287,210	266,268	281,032	305,013
Mackay . . . . .	261,982	197,892	159,718	160,517	148,502	142,092

General aviation activity, which covers all flying other than scheduled airline operations has grown rapidly throughout Australia in recent years and is an important sector of the Australian aviation industry. Hours flown by general aviation during 1983-84 were estimated at 1.75 million.

### Aerodromes

The number of aerodromes throughout Australia and its external territories at 30 June 1985 was 443. Sixty-eight were owned by the Commonwealth Government and 375 by local authorities and private interests. The number of licensed helipads throughout Australia and its territories is 6. Capital expenditure on aerodrome and building construction was \$103.7 million in 1984-85. Maintenance expenditure on Commonwealth Government-owned aerodromes during 1984-85 was \$13.2 million. Expenditure on development and maintenance grants to licensed aerodromes participating in the Local Ownership Plan totalled \$17.5 million.

### Airway facilities

A total of 471 navigational aids were in service at 30 June 1985. The total includes 224 non-directional beacons (NDB), 107 distance measuring equipment (DME), 13 international distance measuring equipment (DMEI), 75 VHF omni-directional ranges (VOR), 17 instrument landing systems (ILS), five twin locator approach systems and 30 ILS locators. In addition, there are 25 privately owned navigation aids which include one DME and 24 NDB's.

One hundred and ninety-six aerodromes are now equipped with night landing facilities. One hundred and twenty-six Australian-designed 'T' systems (T-VASIS) are operating. Seven long-range surveillance radars, two-short range and seven secondary surveillance radars are also in operation. There are thirty-two fully equipped Air Traffic Control Centres and forty-three flight service units in operation.

### Air transport registrations, licenses, etc., in force in Australia

At 30 June 1985 there were 6,933 aircraft registered in Australia. At the same time there were also 63,442 aeroplane pilots' licences in force, of which 28,398 were private pilots' licences, 5,936 commercial pilots' licences, 2,012 senior commercial pilots' licences, 2,558 air transport pilots' licences, and 24,538 student pilots' licences. In addition there were 1,934 helicopter pilots' licences in force of which 158 were private pilots' licences, 821 commercial pilots' licences, 99 senior commercial pilots' licences and 856 student pilots' licences. There were also 868 flight engineer licences, and 7 flight navigator licences in force.

### Accidents and casualties

#### AIR TRANSPORT: ACCIDENTS INVOLVING CASUALTIES (a), AUSTRALIA (b)

	1979	1980	1981	1982	1983	1984
Number . . . . .	37	48	39	51	44	40
Persons killed . . . . .	35	61	53	53	47	45
Persons seriously injured . . . . .	29	33	33	35	29	25

(a) Accidents involving civil aircraft (including registered gliders) which resulted in death or serious injury. Excludes parachutists and casualties involving non-registered aircraft. (b) Excludes accidents outside Australia involving aircraft on the Australian register; includes all accidents to overseas registered aircraft that occur in Australia.

## POSTAL, TELECOMMUNICATION AND RADIOCOMMUNICATION SERVICES

In this section particulars for the Australian Capital Territory are included with those for New South Wales, and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated.

### Department of Communications

The Postal and Telecommunications Department was created on 22 December 1975. It replaced the Postmaster-General's Department, assuming those PMG functions remaining after the formation of the postal and Telecommunications Commissions on 1 July 1975. Following the Federal election in November 1980, the name of the Department was changed to the Department of Communications. A major activity of the Department is the administration of the *Wireless Telegraphy Act 1905* which concerns the regulation and management of the radio frequency spectrum for radiocommunications within the Commonwealth and its Territories.

The Department also undertakes planning for the development of broadcasting and television services in Australia and the determination of standards and practices for technical

equipment used in broadcasting and television services for which formal responsibility attaches to the Minister for Communications pursuant to the provisions of the Broadcasting and Television Act. The Department is closely involved in the development of the Australian Communications Satellite System (ACSS), in association with other government departments and agencies in particular AUSSAT PTY LTD, a government-owned company formed to own and operate ACSS.

Another function of the Department is to provide policy advice to the Minister on postal, telegraphic, telephonic, broadcasting and other like services which are subject to legislation for which the Minister for Communications is responsible.

Authorities responsible to the Minister for Communications have been established to provide within Australia a network of facilities which enable people and organisations:

- to send letters, printed matter, parcels and money in Australia and overseas and to receive such items within Australia from overseas;
- to converse by telephone in Australia and overseas;
- to send and receive written messages, data pictures and other visual matter by electrical means within Australia and to and from overseas;
- to relay on the telecommunications network, radio and television broadcasts emanating within Australia and those on relay to and from overseas.

### Australian Postal Commission

The Australian Postal Commission was established under the *Postal Services Act 1975*. It commenced operations on 1 July 1975 and trades under the name Australia Post.

Under the *Postal Services Act 1975*, the Australian Postal Commission is required to operate Australia's postal services in such a manner as will best meet the social, industrial and commercial needs of the Australian people. In performing its functions, the Commission is required to have regard for the special needs for postal services of Australian people who reside or carry out business outside the cities. It is also required to raise sufficient revenue to cover operating expenditure and to fund at least half of its capital expenditure.

Australia Post provides surface and airmail services within Australia and to and from other countries. Special services provided include express courier, electronic mail, priority paid mail, business reply post, cash-on-delivery, certified mail, freepost, messenger delivery, a security mail service and a number of reduced rate services.

Australia Post operates a money transfer service, sells postal products such as padded post bags, postal stationery and philatelic items, and acts as agent on behalf of Federal, State and local Government departments and authorities and for private sector principals.

Australia Post is the authority for the issue of postage stamps throughout the Commonwealth of Australia and its external territories.

The following tables give details of Australia Post's financial results, services and operations for 1984-85. Selected tables show figures for earlier periods.

**AUSTRALIAN POSTAL COMMISSION: PROFIT AND LOSS, 1980 TO 1985**  
(**\$'000**)

Year ended 30 June—	1980	1981	1982	1983	1984	1985
<b>Revenue—</b>						
Mail services . . . . .	582,200	668,676	767,843	870,719	971,676	1,080,539
Commission on agency services . . . . .	82,189	83,471	86,935	90,113	90,449	94,547
Postal money order service . . . . .	6,350	7,758	10,059	10,544	11,632	11,940
Other revenue . . . . .	19,442	22,147	22,591	28,058	21,993	24,269
<b>Total . . . . .</b>	<b>690,181</b>	<b>782,052</b>	<b>887,428</b>	<b>999,434</b>	<b>1,095,750</b>	<b>1,211,295</b>
<b>Expenditure—</b>						
Labour and related expenditure . . . . .	n.a.	n.a.	n.a.	774,662	831,600	911,776
Carriage of mail by contractors . . . . .	n.a.	n.a.	n.a.	83,665	92,984	103,551
Depreciation and interest . . . . .	n.a.	n.a.	n.a.	15,056	15,299	17,159
Other expenditure . . . . .	n.a.	n.a.	n.a.	117,257	131,716	154,301
<b>Total . . . . .</b>	<b>678,495</b>	<b>794,795 (a)</b>	<b>906,650</b>	<b>990,640</b>	<b>1,071,599</b>	<b>1,186,787</b>

(a) Includes an abnormal adjustment to implement new depreciating accounting arrangements.



**AUSTRALIAN POSTAL COMMISSION: PROFIT AND LOSS STATEMENT FOR  
THE YEAR ENDED 30 JUNE 1985**

(\$'000)

Revenue—		
Mail services . . . . .		1,080,539
Commission on agency services . . . . .		94,547
Postal money order service . . . . .		11,940
Other revenue . . . . .		24,269
<i>Total</i> . . . . .		<i>1,211,295</i>
Expenditure—		
Labour and related expenditure . . . . .		911,776
Carriage of mails by contractors . . . . .		103,551
Accommodation . . . . .		46,803
Stores and supplies . . . . .		47,784
Depreciation . . . . .		11,733
Interest . . . . .		5,426
Other operating expenditure . . . . .		59,714
<i>Total</i> . . . . .		<i>1,186,787</i>
Operating Profit . . . . .		24,508
Appropriations—		
Accumulated loss brought forward . . . . .		12,666
Operating profit for the year . . . . .		24,508
Accumulated profit carried forward . . . . .		37,174

**AUSTRALIAN POSTAL COMMISSION: SUMMARY OF TRANSACTIONS  
AFFECTING FIXED ASSETS, 1984-85**

(\$'000)

<i>Class of assets</i>	<i>Balance at 1 July 1984</i>	<i>Additions in the year</i>	<i>Asset expenditure written out</i>	<i>Balance at 30 June 1985 (a)</i>
Land . . . . .	41,228	981	245	41,964
Buildings . . . . .	284,518	21,063	1,611	303,970
Motor vehicles . . . . .	23,855	8,950	4,161	28,644
Plant and equipment . . . . .	58,694	10,190	4,118	64,766
<i>Total of fixed assets</i> . . . . .	<i>408,295</i>	<i>41,184</i>	<i>10,135</i>	<i>439,344</i>
Less accumulated depreciation . . . . .	77,087	—	—	81,336
<b>Net book value of fixed assets</b> . . . . .	<b>331,208</b>	<b>—</b>	<b>—</b>	<b>358,008</b>

(a) At cost.

**AUSTRALIAN POSTAL COMMISSION: ANALYSIS OF TRANSACTIONS  
AFFECTING ACCUMULATED DEPRECIATION, 1984-85**

(\$'000)

<i>Class of assets</i>	<i>Balance at 1 July 1984</i>	<i>Depreciation provided for in 1984-85</i>	<i>Accumulated depreciation written out</i>	<i>Balance at 30 June 1985</i>
Buildings . . . . .	50,218	5,157	684	54,691
Motor vehicles . . . . .	9,833	3,186	2,934	10,085
Plant and equipment . . . . .	17,036	3,390	3,866	16,560
<b>Accumulated depreciation</b> . . . . .	<b>77,087</b>	<b>11,733</b>	<b>7,484</b>	<b>81,336</b>

**AUSTRALIAN POSTAL COMMISSION: PERSONS ENGAGED IN PROVIDING POSTAL  
SERVICES AT  
30 JUNE 1984 AND 1985**

	<i>N.S.W. (incl. H.Q. A.C.T.)</i>		<i>Vic.</i>	<i>Qld</i>	<i>S.A. (incl. N.T.)</i>		<i>W.A.</i>	<i>Tas.</i>	<i>Aust. 1985</i>	<i>Aust. 1984</i>
<b>Official staff (a)—</b>										
Full-time Permanent . . . . .	617	12,115	8,420	4,202	2,639	2,341	676	31,010	30,078	
Full-time Temporary . . . . .	9	1,731	848	282	110	158	63	3,201	2,875	
Part-time . . . . .	—	1,234	543	296	327	318	95	2,813	2,700	
<b>Other staff (b)</b> . . . . .	<b>—</b>	<b>2,994</b>	<b>1,788</b>	<b>1,620</b>	<b>846</b>	<b>634</b>	<b>380</b>	<b>8,262</b>	<b>8,417</b>	
<b>Total</b> . . . . .	<b>626</b>	<b>18,074</b>	<b>11,599</b>	<b>6,400</b>	<b>3,922</b>	<b>3,451</b>	<b>1,214</b>	<b>45,286</b>	<b>44,070</b>	

(a) 'Official Staff' are those whose employment is governed by the *Postal Services Act 1975*. (b) Includes persons who are not employed under the *Postal Services Act*, but who are employed on the basis of business transacted. Also included are persons or organisations who hold road mail service contracts with the Australian Postal Commission.

**AUSTRALIAN POSTAL COMMISSION: MAIL DELIVERY NETWORK AND POST OFFICES AT  
30 JUNE 1984 AND 1985**

	<i>N.S.W. (incl. A.C.T.)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (incl. N.T.)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust. 1985</i>	<i>Aust. 1984</i>
Contract road services . . .	1,511	736	1,079	288	396	186	4,196	4,243
Households receiving mail	2,052,667	1,418,860	893,515	538,114	499,901	150,189	5,553,246	5,488,220
Business receiving mail . .	199,910	136,775	97,603	49,591	48,201	13,409	545,489	519,726
Post Offices—								
At 1 July 1984 . . . . .	499	333	211	148	156	41	1,388	1,395
At 30 June 1985 . . . . .	502	336	213	147	156	41	1,395	1,388
Agencies—								
At 1 July 1984 . . . . .	1,072	877	538	443	280	192	3,402	3,448
At 30 June 1985 . . . . .	1,052	863	534	438	255	190	3,332	3,402
<i>Total post offices   and agencies . . . . .</i>	<i>1,554</i>	<i>1,199</i>	<i>747</i>	<i>585</i>	<i>411</i>	<i>231</i>	<i>4,727</i>	<i>4,790</i>

**AUSTRALIAN POSTAL COMMISSION: TOTAL POSTAL ARTICLES HANDLED**

('000)

<i>Year ended 30 June</i>	<i>Posted for delivery within Australia</i>	<i>Posted for places abroad</i>	<i>Received from abroad</i>	<i>Total postal articles handled</i>
1980 . . . . .	2,379,953	94,826	156,573	2,631,352
1981 . . . . .	2,503,450	107,798	155,642	2,766,890
1982 . . . . .	2,606,124	105,154	165,276	2,876,554
1983 . . . . .	2,669,363	111,050	163,575	2,943,988
1984 . . . . .	2,764,113	106,585	164,362	3,035,060
1985 . . . . .	2,877,476	107,783	163,074	3,148,333

**AUSTRALIAN POSTAL COMMISSION: ORDINARY POSTAL ARTICLES(a)**

('000)

<i>Year ended 30 June</i>	<i>Standard articles</i>				<i>Non-standard articles</i>			
	<i>Posted for delivery within Australia</i>	<i>Posted for places abroad</i>	<i>Received from abroad</i>	<i>Total articles</i>	<i>Posted for delivery within Australia</i>	<i>Posted for places abroad</i>	<i>Received from abroad</i>	<i>Total articles</i>
1983 . . . . .	2,292,193	93,262	121,110	2,506,565	345,287	15,278	37,856	398,421
1984 . . . . .	2,376,733	89,544	122,084	2,588,361	355,599	14,356	37,395	407,350
1985 . . . . .	2,468,109	91,829	117,827	2,677,765	376,323	13,304	40,139	429,766

**STATES—YEAR ENDED 30 JUNE 1985**

New South Wales (incl. A.C.T.) . . . . .	989,878	33,205	56,576	1,079,659	154,645	6,259	15,390	176,294
Victoria . . . . .	659,247	31,457	39,576	730,280	122,076	3,881	16,585	142,542
Queensland . . . . .	367,109	8,959	7,425	383,493	45,170	1,130	4,483	50,783
South Australia (incl. N.T.) . . . . .	201,608	8,326	4,649	214,583	24,429	775	1,078	26,282
Western Australia . . . . .	198,302	9,372	8,392	216,066	23,718	1,210	2,201	27,129
Tasmania . . . . .	51,965	510	1,209	53,684	6,285	49	402	6,736

(a) Includes Certified, Messenger Delivery and Priority Paid Mail.

**AUSTRALIAN POSTAL COMMISSION: REGISTERED ARTICLES(a) AND PARCELS**  
(\*000)

Year ended 30 June	Registered articles				Parcels			
	Posted for delivery in Australia	Posted for places abroad	Received from abroad	Total articles	Posted for delivery in Australia	Posted for places abroad	Received from abroad	Total articles
1983	2,956	1,296	2,696	6,948	28,927	1,214	1,913	32,054
1984	2,801	1,301	2,689	6,789	28,980	1,384	2,196	32,560
1985	2,764	1,280	2,620	6,664	30,280	1,370	2,488	34,138

**STATES—YEAR ENDED 30 JUNE 1985**

New South Wales (incl. A.C.T.)	913	653	1,640	3,206	11,611	557	1,074	13,242
Victoria	701	414	813	1,928	8,466	454	905	9,825
Queensland	497	66	41	604	4,993	156	207	5,356
South Australia (incl. N.T.)	293	67	19	379	2,326	86	91	2,503
Western Australia	252	78	107	437	2,310	109	164	2,583
Tasmania	108	2	—	110	574	8	47	629

(a) Totals include Certified, Messenger Delivery and Priority Paid Mail.

**AUSTRALIAN POSTAL COMMISSION: SPECIAL SERVICES:**  
**ARTICLES HANDLED**  
(\*000)

Year ended 30 June	Certified mail	Messenger delivery	Priority paid mail
1983	6,178	1,459	2,711
1984	6,064	1,329	6,760
1985	7,101	659	8,258

**STATES—YEAR ENDED 30 JUNE 1985**

New South Wales (incl. A.C.T.)	2,435	362	5,344
Victoria	2,111	167	1,682
Queensland	1,113	39	508
South Australia (incl. N.T.)	659	46	359
Western Australia	567	40	282
Tasmania	216	5	83

### Telecommunications services within Australia

The Australian Telecommunications Commission (Telecom Australia) commenced operation on 1 July 1975, taking over the telecommunications functions of the former Postmaster-General's Department.

The functions of the Commission as set out in the *Telecommunications Act 1975* are:

- to plan, establish, maintain and operate telecommunications services within Australia;
- to operate such other services as the Commission is authorised by this Act to operate;
- to provide, at the request of the Australian Government, technical assistance outside Australia in relation to the planning, establishment, maintenance and operation of telecommunications services in countries outside Australia; and
- to do anything incidental or conducive to the performance of any of the preceding functions.

#### Financial results

The following tables show the earnings and expenses situation for the latest available three years of the Commission's operations.

**AUSTRALIAN TELECOMMUNICATIONS COMMISSION: REVENUE**  
(S'000)

<i>Year ended 30 June—</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>
Telephone rentals . . . . .	1,001,212	1,165,912	1,290,545
Telephone calls . . . . .	2,011,546	2,328,977	2,640,434
Telephone connections and installations. . . . .	157,750	178,628	187,844
Other network services. . . . .	n.a.	148,550	174,347
Product sales and advertising . . . . .	n.a.	221,389	276,393
Contract work . . . . .	n.a.	108,102	107,047
Other operating revenue . . . . .	n.a.	69,172	88,248
<b>Total . . . . .</b>	<b>n.a.</b>	<b>4,220,731</b>	<b>4,764,858</b>

**AUSTRALIAN TELECOMMUNICATIONS COMMISSION: EXPENDITURE**  
(S'000)

<i>Year ended 30 June—</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>
Installation and maintenance of customer services. . . . .	444,796	722,927	782,447
Maintenance of network plant . . . . .	414,570	476,807	544,786
Marketing and operations . . . . .	728,867	823,531	890,124
General and administrative . . . . .	261,554	281,660	422,021
Accommodation . . . . .	155,369	174,258	193,549
Depreciation . . . . .	711,853	570,829	647,825
Interest . . . . .	656,172	861,937	898,915
<b>Total . . . . .</b>	<b>3,373,181</b>	<b>3,911,949</b>	<b>4,379,667</b>

A brief history of the development of telecommunications in Australia is shown in Year Book No. 59, pages 378–82. Common internal telecommunication operations comprise telephone, telegram, telex and data services. The following tables give details of these services.

**TELEPHONE SERVICES IN OPERATION AT 30 JUNE 1985**

	<i>N.S.W. (Incl. A.C.T.)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (Incl. N.T.)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Australia</i>
<b>Ordinary exchange services—</b>							
Automatic . . . . .	2,102,556	1,527,618	865,687	552,117	518,697	155,272	5,721,947
Manual. . . . .	10,686	—	3,306	2,311	37	—	16,340
<b>Total . . . . .</b>	<b>2,113,242</b>	<b>1,527,618</b>	<b>868,993</b>	<b>554,428</b>	<b>518,734</b>	<b>155,272</b>	<b>5,738,287</b>
<b>Party line services—</b>							
Automatic . . . . .	382	—	462	25	25	—	894
Manual. . . . .	989	—	680	150	4	—	1,823
<b>Total . . . . .</b>	<b>1,371</b>	<b>—</b>	<b>1,142</b>	<b>175</b>	<b>29</b>	<b>—</b>	<b>2,717</b>
<b>Private branch exchange services—</b>							
Automatic . . . . .	172,450	133,473	48,493	33,618	18,801	5,688	412,523
Manual. . . . .	189	—	42	54	—	—	285
<b>Total . . . . .</b>	<b>172,639</b>	<b>133,473</b>	<b>48,535</b>	<b>33,672</b>	<b>18,801</b>	<b>5,688</b>	<b>412,808</b>
<b>Public telephones—</b>							
Automatic . . . . .	11,090	9,761	5,602	3,123	2,991	1,112	33,679
Manual. . . . .	251	—	136	50	19	—	456
<b>Total . . . . .</b>	<b>11,341</b>	<b>9,761</b>	<b>5,738</b>	<b>3,173</b>	<b>3,010</b>	<b>1,112</b>	<b>34,135</b>
<b>Total all services—</b>							
Business automatic . . . . .	586,870	434,159	241,916	141,474	145,254	39,383	1,589,056
Business manual . . . . .	5,144	—	2,292	1,235	50	—	8,721
Non-business automatic . . . . .	1,699,608	1,236,693	678,328	447,334	395,260	122,689	4,579,912
Non-business manual . . . . .	6,971	—	1,872	1,405	10	—	10,258
<b>Total Services . . . . .</b>	<b>2,298,593</b>	<b>1,670,852</b>	<b>924,408</b>	<b>591,448</b>	<b>540,574</b>	<b>162,072</b>	<b>6,187,947</b>

**TELEPHONE INSTRUMENTS IN SERVICE**

<i>At 30 June—</i>	<i>N.S.W. (Incl. A.C.T.)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (Incl. N.T.)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Australia</i>
1983 . . . . .	3,091,583	2,387,943	1,103,479	765,536	690,417	227,704	8,266,662
1984 . . . . .	3,069,260	2,357,539	1,169,522	729,228	771,795	231,370	8,328,714
1985 . . . . .	3,199,871	2,455,500	1,243,494	808,728	779,058	240,512	8,727,163
Number per 100 population at 30 June	58.9	54.3	48.8	59.6	55.9	54.7	55.8

## COMMUNICATIONS

## LOCAL AND TRUNK LINE TELEPHONE CALLS

Year ended 30 June—	1983	1984	1985
Effective paid			
local calls . . . . .	5,596,916,000	6,174,595,000	6,500,000,000
Local calls per service . . . . .	1,021	1,077	1,050
Trunk line calls . . . . .	837,171,000	933,621,000	1,026,126,000
Trunk calls per service . . . . .	153	163	166
<b>Total calls . . . . .</b>	<b>6,434,087,000</b>	<b>7,108,216,000</b>	<b>7,526,126,000</b>

## DATEL SERVICES (a)—DATA MODEMS IN OPERATION

At 30 June—	N.S.W. (Incl. A.C.T.)	Vic.	Qld	S.A. (Incl. N.T.)	W.A.	Tas.	Australia
1983 . . . . .	29,420	18,913	8,716	5,390	5,601	2,151	70,191
1984 . . . . .	34,867	22,570	10,516	6,581	6,318	2,397	83,249
1985 . . . . .	38,959	25,861	12,442	6,880	7,887	2,643	94,672

(a) A Datel service is a combination of a particular type of circuit (either switched network or private line) plus the necessary Modulator Demodulator (Modem) unit to provide data transmission facilities for a specified transmission rate.

Subscriber Trunk Dialling (STD) facilities were introduced during the year 1961–62. For the year ended at 30 June 1985, 97.0 per cent of trunk calls were made by STD.

## Telegrams

Telegrams can be lodged at any post office or telephone office or from any public telephone equipped for multi-coin operation. In addition, telegrams can be dispatched from any subscriber's telephone or telex service. The number of telegrams of various types transmitted within Australia is set out in the following table.

## TELEGRAM TRAFFIC

Year ended 30 June—	1983	1984	1985
Ordinary . . . . .	3,525,243	3,201,625	2,905,874
Urgent . . . . .	98,523	99,019	115,988
Meteorological . . . . .	313,074	258,589	211,088
Service . . . . .	113,900	109,674	124,924
<b>Total telegrams . . . . .</b>	<b>4,050,740</b>	<b>3,668,907</b>	<b>3,357,874</b>

## Telex

Particulars of the operations of the telex network, which are additional to the telegraph traffic shown above, are as follows.

## TELEX NETWORK SERVICES AND INTERNAL CALLS

Year ended 30 June—	Number of services	Internal calls during the year
1983 . . . . .	40,810	45,492,000
1984 . . . . .	42,186	46,725,000
1985 . . . . .	44,851	49,371,000

Further detailed statistics are contained in the Australian Telecommunication Commission's Annual Reports.

## Australia's National Satellite System (AUSSAT)

AUSSAT was formed in 1981 to own and operate Australia's National Satellite System. Shares are held in the Company—75% by the Commonwealth Government and 25% by Telecom. The *Satellite Communications Act 1984* commissions AUSSAT to operate profitably in providing internal satellite communications for Australia and neighbouring regions. The satellite system will complement, diversify and add resilience to Australia's existing ground-based communications systems, and will also provide a capability for services not presently considered economically justifiable.

Communications provided by the system will benefit not only those people living in isolated areas who have only limited access to broadcasting services, but also the business community generally.

AUSSAT's first two satellites were launched from NASA's Space Shuttle, in August and November 1985. Each satellite was ejected from the Shuttle at an altitude of approximately 250 kms above the earth. Special rocket motors then lifted them to their chosen orbits about 36,000 kms above the equator and slightly to the east of Australia. A third satellite will be launched in mid 1986.

Each satellite is capable of receiving signals, amplifying them and retransmitting the amplified signals back to any point in the coverage area. This function is performed by transponders; four 30 watt (high power) and eleven 12 watt (low power) on each satellite.

In orbit, the satellites are monitored by two control stations, one in Sydney and one in Perth. These are known as the Tracking, Telemetry Command and Monitoring (TTC & M) stations. The Sydney station performs the additional function of monitoring and controlling the status of the satellites while they are in orbit.

### **Overseas telecommunications services**

The Overseas Telecommunications Commission (Australia) (OTC), established by the *Overseas Telecommunications Act 1946*, is a Commonwealth Statutory Authority responsible for the establishment, maintenance, operation and development of all public telecommunications services between Australia and other countries, between Australia and its external territories and with ships at sea. It has a specific responsibility, under section 38A, to make its services available at the lowest possible rates of charges. OTC is responsible to the Commonwealth Parliament through the Minister for Communications.

Telephone, telex, public message telegram, switched data and leased circuit services are provided to most countries and places throughout the world by means of submarine cables, communications satellites and, in a decreasing number of cases, short wave radio. Television relay is provided to and from countries with access to satellite communications facilities. Other services include INTERPLEX (a large scale, common-use, leased-message switching system), MIDAS (a data search and retrieve service), OVERSEASFAX (an international facsimile service for document transfer), INTERTEL (a comprehensive public message service for small businesses), MINERVA (an electronic mail system) and OTC NET (an international corporate voice/data network using private leased circuits).

### **International consultation**

OTC participates in the Commonwealth Telecommunications Organisation (CTO), the International Telecommunications Union (ITU), the International Telecommunications Satellite Organisation (INTELSAT) which owns and operates the international telecommunications satellite system, and the International Maritime Satellite Organisation (INMARSAT), which operates an international satellite system for the provision of high-grade telecommunications, including distress and search and rescue communications, with ships at sea. OTC also participates in the regional telecommunications organisations such as the Asia-Pacific Telecommunity and the South Pacific Regional Telecommunications Meetings (SPECTEL).

### **Establishments**

The Commission's Head Office is in Sydney and it has offices in Canberra, Melbourne, Brisbane and Perth. Its only overseas office was opened in New York in October 1985. The Commission owns and operates International Gateway terminals at Paddington and Broadway in Sydney which interface with the national telecommunications network. A third International Gateway terminal is being established at Scoresby, near Melbourne, which will become operational in 1987.

The Commission also owns and operates cable stations at Sydney, Cairns (Qld), Guam in the Mariana Islands and at Norfolk Island; satellite earth stations at Carnarvon (W.A.), Ceduna (S.A.), Healesville (Vic.) and Moree (N.S.W.); international radio stations at Doonside and Bringelly (N.S.W.) and at Gnangara (W.A.); and fourteen coast radio stations at points around the Australian coast for communicating with ships at sea. A new cable station for the Australia-Indonesia-Singapore (A-I-S) cable system at Gnangara, Perth, will be brought into service in 1986.

### **Submarine cables**

OTC is a part owner of the following submarine cables (the year in which they opened for service is in brackets): COMPAC, Auckland-Suva-Hawaii (1963); SEACOM, Sydney-Madang-Guam-Hong Kong (1967); TRANSPAC II, Hawaii-Guam-Okinawa (Japan)

(1975); HAW III, Hawaii-U.S. Mainland (1975); TASMAN, Sydney-Auckland (1976); A-PNG, Sydney-Port Moresby (1976); OLUHO, Okinawa (Japan)-Philippines-Hong Kong (1977); ASEAN P-S, Philippines-Singapore (1978); ASEAN I-S, Indonesia-Singapore (1980) and IOCOM, Penang-Madras (1981); ASEAN M-S-T, Malaysia-Singapore-Thailand (1983); and ANZCAN, Sydney-Norfolk Island-Auckland-Suva-Hawaii-Vancouver (1984).

In 1984 the Government gave approval for OTC to participate in the construction of three new Indian Ocean cable systems: A-I-S, Perth-Jakarta-Singapore; SIN-HON-TAI, Singapore-Hong Kong-Taipei; and SEA-ME-WE, Singapore-Middle East-Europe. OTC's investment in the three systems, which will enter service in 1985-86, is approximately \$135 million. The Australian end of the A-I-S cable was landed in Perth in May 1985.

### Satellites

OTC is the sixth largest shareholder in INTELSAT which operates communication satellites over the Indian, Pacific and Atlantic Oceans, and a major shareholder in INMAR-SAT (see above). INTELSAT satellites now carry approximately two-thirds of Australia's international telecommunications and, through OTC, provide capacity through which the remote area television service is provided by the ABC.

### 1984-85 Statistics

As at 31 March 1985, OTC staff totalled 2,281; revenue for the previous 12 months was \$411 million and profit before tax was \$92 million. Telephone service, which is available to more than 233 overseas destinations, provided about 70 per cent of revenue, telex about 8 per cent, leased services about 5 per cent and telegram about 4 per cent. International Subscriber Dialling (ISD) from Australia is available to more than 165 countries.

More detailed statistics are contained in OTC'S 1985 Annual Report.

### Detailed information on OTC

The Commission reports on its operations to Parliament through its Minister about September each year. Traffic, financial and other information is contained in its Annual Report, copies of which are available on request from the OTC.

### International telecommunication traffic

The following table shows particulars of overseas telecommunication traffic between Australia and overseas countries for the years ended 31 March 1984 and 1985.

INTERNATIONAL TELECOMMUNICATION SERVICES: YEARS ENDED 31 MARCH 1984 AND 1985

Service	Transmissions					
	From Australia		To Australia		Total	
	1983-84	1984-85	1983-84	1984-85	1983-84	1984-85
Telephone . . . . . '000 paid minutes	153,350	183,995	113,325	133,600	266,675	317,595
Telex . . . . . '000 paid minutes	28,000	30,021	28,725	30,924	56,725	60,945
Television programs . . . . . paid minutes	12,591	23,444	53,880	58,362	(a)69,278	(b)100,594
Telegraph services . . . . . '000 words	25,990	23,507	18,925	17,463	44,915	40,970

(a) Includes 2,807 paid minutes of television programs distributed within Australia by OTC. (b) Includes 18,788 paid minutes of television programs distributed within Australia by OTC.

### Coast Radio Service

During the year ended 31 March 1985, the Coast Radio Service administered by OTC handled a total of 746,000 radiotelephone minutes, 12,688,000 radiotelegram words and 144,000 radiotelex minutes. Leased services saw an increase with radiotelephone leased services up 56 per cent to 7,794,000 hours and radiotelex leased services up 73.5 per cent to 5,568,000 hours.

### Radiocommunication stations authorised

At 30 June 1978 there were 460,171 civil radiocommunication stations authorised for operation in Australia and its Territories. Of these, 6,316 were stations established at fixed locations, 24,000 were land stations which were established at fixed locations for communication with mobile stations, 13 were space and broadcasting stations, 420,442 were mobile stations and 9,400 were amateur stations. Particulars of broadcasting stations are shown on page 468.

## BROADCASTING AND TELEVISION

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Government and, pursuant to the *Broadcasting and Television Act 1942*, is one of the responsibilities of the Minister for Communications. Federal bodies which are involved include the Australian Telecommunications Commission, the Australian Broadcasting Corporation (ABC), the Special Broadcasting Service, the Australian Broadcasting Tribunal, the Department of Communications and the Overseas Telecommunications Commission.

Basically, the Australian broadcasting system is comprised of the following types of stations:

- national radio and television stations broadcasting programs produced by the Australian Broadcasting Corporation;
- commercial radio and land television stations operated by companies under licence;
- public radio stations operated by corporations under licence on a non-profit basis; and
- stations operated under the aegis of the Special Broadcasting Service.

As from 1 January 1977, the Minister for Communications assumed the responsibility for broadcasting planning, including all matters relating to the technical operation of stations, and for the investigation of interference to the transmission and reception of programs.

### The Commercial Radio and Television Service

Commercial radio and television stations are operated by companies under licences granted by the Australian Broadcasting Tribunal and with technical operating conditions determined by the Minister for Communications. The stations obtain income from the broadcasting of advertisements. At 30 June 1985 there were 137 commercial radio stations in operation in Australia. Call signs for radio stations are prefixed by numerals indicating each State of Australia. (2—New South Wales, 3—Victoria, 4—Queensland, 5—South Australia, 6—Western Australia, 7—Tasmania, 8—Northern Territory). In addition there were fifty commercial television stations and 130 commercial television translator stations in operation in Australia. A television translator station is a station of low power designed to receive the signals of another station and re-transmit them; it does not originate programs. There are nine limited coverage repeater stations in Australia operated by mining companies which transmit programs recorded on magnetic tape.

### The Public Broadcasting Service

The Broadcasting and Television Act also makes provision for the grant of licences for the operation of public radio and television stations. At 30 June 1985, 53 public radio stations were broadcasting programs ranging from fine music to ethnic languages and programs produced by and directed towards specific communities. A number of public radio stations are associated with tertiary educational institutions. There are no public television services in operation.

### The Special Broadcasting Service

The Special Broadcasting Service (SBS) was established by the Commonwealth Government on 1 January 1978 to provide multilingual radio services and, if authorised by regulations, to provide multilingual television services. A regulation authorising the provision of multilingual television services. A regulation authorising the provision of multilingual television services was gazetted in August 1978. The Service is also empowered by the *Broadcasting and Television Act 1977* to provide broadcasting and television services for such special purposes as are prescribed by the Government.

In carrying out its functions the SBS provides:

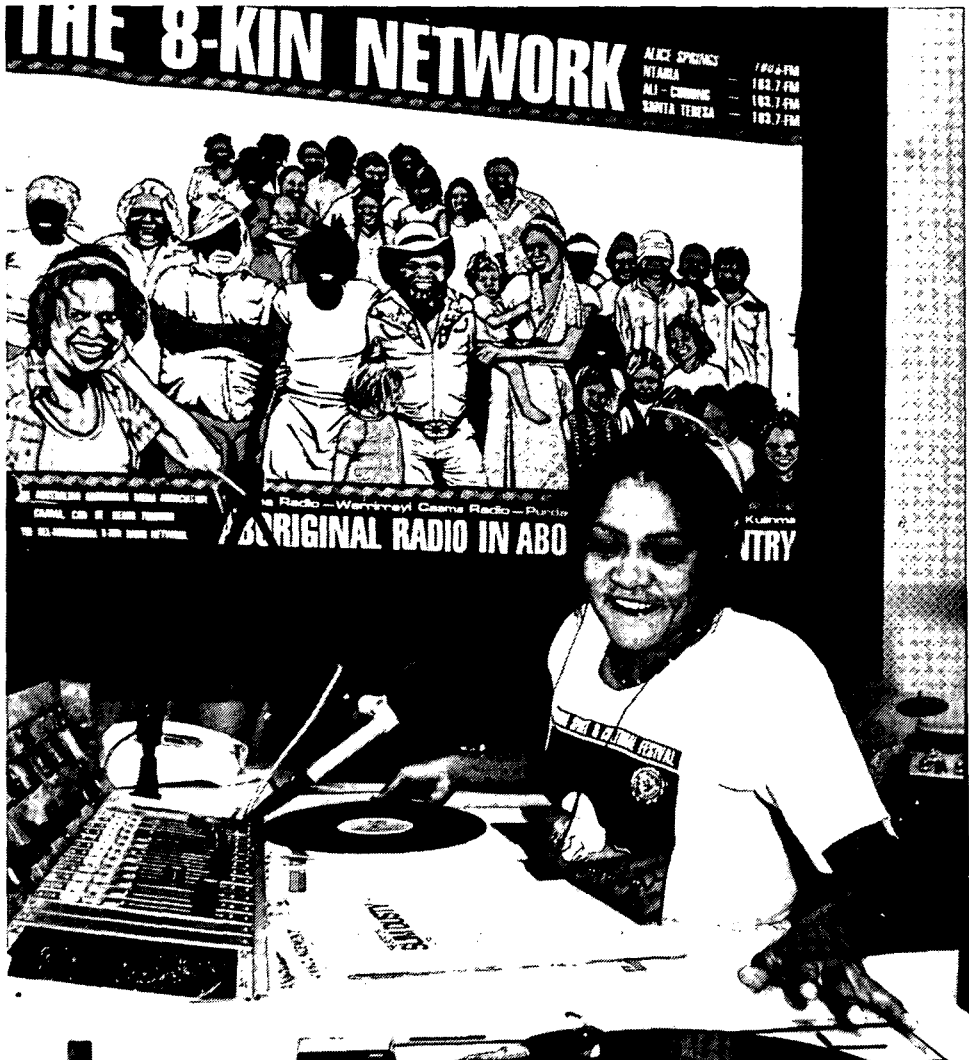
- *multilingual broadcasting services to:*
  - the Melbourne metropolitan area and Geelong through radio station 3EA which broadcasts in 42 languages for 126 hours per week
  - the Sydney metropolitan area through radio station 2EA which broadcasts in 48 languages for 126 hours per week
  - the provincial centres of Newcastle and Wollongong in N.S.W. through 2EA translator stations.
- subsidies to public broadcasting stations in Adelaide, Brisbane, Canberra, Hobart, Perth, Albury, Armidale, Bathurst, Lismore and Newcastle for the production and presentation of ethnic radio programs.
- a subsidy to Whyalla Ethnic Broadcasters Inc. for the production of ethnic radio programs for presentation on commercial radio station 5AU Whyalla.
- a *multicultural television service* on VHF Channel 0 and UHF Channel 28 to the Sydney and Melbourne metropolitan areas and Geelong.



## Broadcasting services

### The Australian Broadcasting Tribunal

The Australian Broadcasting Tribunal came into being on 1 January 1977 and is responsible for certain of the functions previously performed by the Australian Broadcasting Control Board (abolished 31 December 1976), including the licensing and supervising of the operations (other than technical aspects) of all stations except national stations. The Tribunal is empowered to grant, renew, suspend or revoke licences, to determine program and advertising standards applicable to licensed stations and to determine the hours of transmission of licensed stations. In particular, the Tribunal is required to conduct public inquiries into the granting of licences following the invitation of applications by the Minister. The Tribunal may also conduct inquiries into the renewal of licences, the setting of standards of broadcasting practices, alleged breaches of licence conditions and such other matters as the Minister may direct.



Australia's first Aboriginal radio station, 8-KIN FM, operated by the Central Office Australian Aboriginal Media Association commenced broadcasting in 1985.

*Australian Information Service*

### The National Broadcasting Service

In sound broadcasting the programs of the National Broadcasting Service are provided by the Australian Broadcasting Corporation through transmitters operated by Telecom Australia on behalf of the ABC and the Department of Communications.

*Technical facilities.* At 30 June 1985 the National Broadcasting Service comprised 149 transmitting stations, of which ninety-six were medium frequency, thirty-seven frequency modulation and sixteen high frequency (five internal and eleven Radio Australia).

The medium-frequency transmitters operate in the broadcast band 526.5 to 1,606.5 kilohertz. The high-frequency stations, using frequencies within the band of three to thirty megahertz, provide services to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland.

Many of the programs provided by country stations are relayed from the capital cities using high-quality program transmission lines. A number of program channels are utilised to link national broadcasting stations in the capital cities of Australia. When necessary, this system is extended to connect both the national and commercial broadcasting stations.

At 30 June 1985 eighty-three of the ABC's medium-frequency stations were situated outside the six State capital cities.

*Program facilities.* The programs of the Australian Broadcasting Corporation cover a wide range of activities. The proportions of broadcasting time allocated on Radio 1 stations to the various types of program during 1984-85 were as follows: entertainment 51.2 per cent; news 8.3 per cent; sporting 13.4 per cent; spoken word 14.4 per cent; parliament 10.2 per cent; religious 1.2 per cent; rural 0.7 per cent; and presentation 0.5 per cent. By contrast, the ABC's Radio 2 station's programming was: classical music 53.0 per cent; light music 0.4 per cent; entertainment 3.4 per cent; drama and features 6.0 per cent; education 5.6 per cent; spoken word 14.1 per cent; religious 3.6 per cent; news 8.4 per cent; rural 3.6 per cent; and presentation 1.5 per cent. Radio 3 (regional) stations feature a higher proportion of news and rural programs. Further particulars of the operations of the Australian Broadcasting Corporation in respect of music, drama and features, youth education, talks, rural broadcasts, news, and other activities are shown in the Annual Report of the ABC.

### Overseas Broadcasting Service

There are six high-frequency stations at Shepparton, two at Lyndhurst, Victoria, three at Darwin, N.T. and three at Carnarvon, Western Australia which provide the overseas service known as Radio Australia. As in the case of the National Broadcasting Service, these stations are maintained and operated by Telecom Australia, and their programs are arranged by Radio Australia. The programs, which, as well as entertainment, give news and information about Australia presented objectively, are directed to most parts of the world but with special emphasis on Asia and the Pacific. They include sixty-seven news bulletins a day. The overseas audience has been quite substantial in recent years, as evidenced by a large number of letters from listeners abroad (181,708 in 1983-84 and 178,540 in 1984-85), Radio Australia broadcasts in nine languages—English, Indonesian, Japanese, Neo-Melanesian, Thai, French, Standard Chinese, Cantonese and Vietnamese.

BROADCASTING STATIONS: 30 JUNE 1985

Type of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
National—									
Medium frequency . . . . .	21	7	21	10	23	6	6	2	96
High frequency . . . . .	—	2	2	—	1	—	—	—	5
Frequency modulation . . . . .	11	7	6	3	6	2	1	1	37
Overseas—									
Short wave (Radio Australia) . . . . .	—	8	—	—	3	—	3	—	14
Commercial—									
Medium frequency . . . . .	43	24	29	10	17	8	2	2	135
Frequency modulation . . . . .	2	2	1	1	1	—	—	—	7
Public broadcasting—									
Medium frequency . . . . .	2	2	1	1	1	—	—	1	(a)8
Frequency modulation . . . . .	8	4	3	2	2	2	2	—	23

(a) Includes broadcasting stations 2EA and 3EA operated by the Special Broadcasting Service.

## Television services

### The National Television Service

The National Television Service is provided by the Australian Broadcasting Corporation through transmitters operated by Telecom Australia on behalf of the ABC and the Department of Communications. The first national station (ABN Sydney) commenced regular transmission on 5 November 1956. At 30 June 1985, 290 stations were operating—84 transmitters and 206 translator stations.

The television programs provided by the Australian Broadcasting Corporation cover a wide range of activities. The proportions of television time allocated among the ABC's various departments at 30 June 1985 were as follows: drama 19.62 per cent; public interest 13.73 per cent; sporting 13.11 per cent; news 5.99 per cent; variety and acts 4.64 per cent; education 26.52 per cent; musical performance 1.51 per cent; religious 1.03 per cent; special arts and aesthetics 7.52 per cent; and presentation 6.12 per cent. The average weekly transmission time for the 276 national television transmitters was ninety-five hours during the year ended 30 June 1984.

During the year ended 30 June 1985, fourteen new national translator channels went into operation—one in New South Wales, two in Victoria, ten in Queensland and one in Western Australia.

### Colour television

Colour television (PAL) was introduced in Australia late in 1974 and services became fully effective in March 1975.

TELEVISION AND TRANSLATOR STATIONS: 30 JUNE 1985

Type of station and location	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
National—									
Metropolitan television . . .	1	1	1	1	1	1	1	1	8
Country television . . . . .	13	8	31	4	15	2	3	—	76
Translator . . . . .	40	16	64	16	42	15	12	1	206
<i>Total, National</i> . . . . .	<i>54</i>	<i>25</i>	<i>96</i>	<i>21</i>	<i>58</i>	<i>18</i>	<i>16</i>	<i>2</i>	<i>290</i>
Commercial—									
Metropolitan television . . .	3	3	3	3	2	1	1	1	17
Country television . . . . .	11	6	8	3	4	1	—	—	33
Translator . . . . .	36	12	24	5	7	17	—	1	102
<i>Total, Commercial</i> . . . . .	<i>50</i>	<i>21</i>	<i>35</i>	<i>11</i>	<i>13</i>	<i>19</i>	<i>1</i>	<i>2</i>	<i>152</i>

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- Road Traffic Accidents Involving Casualties (Admission to hospitals), Australia (quarterly) (9405.0)

### Other Publications

Information additional to that contained in ABS publications is available in the annual reports and other statements of the Department of Transport, the Department of Aviation, the various harbour boards and trusts, the several Government railway authorities, the Australian Postal Commission, the Australian Telecommunications Commission, and the Australian Broadcasting Corporation.

## CHAPTER 21

### PRIVATE FINANCE

This chapter contains statistics on the activities and structure of financial institutions including banks, building societies, insurance companies, finance companies, credit unions and co-operative societies together with descriptions of their operations and relevant controlling legislation.

### MONEY

#### Currency

Australia has a decimal system of currency, the unit being the dollar which is divided into 100 cents. Australian notes are issued in the denominations of \$2, \$5, \$10, \$20, \$50 and \$100 and coins in the denominations of 1c, 2c, 5c, 10c, 20c, 50c and \$1. The \$1 note was replaced by the \$1 coin in 1984.

For additional information on note issues and coinage, refer to the List of Special Articles, etc. towards the back of this Year Book.

#### AUSTRALIAN NOTES ON ISSUE

(\$ million)

	<i>Last Wednesday in June</i>					
	1980	1981	1982	1983	1984	1985
\$1 . . . . .	68.6	74.1	78.8	81.4	58.2	45.1
\$2 . . . . .	145.1	152.7	158.4	162.9	168.6	179.1
\$5 . . . . .	143.2	153.9	165.6	174.1	183.1	192.1
\$10 . . . . .	567.6	555.9	546.7	531.5	512.9	518.1
\$20 . . . . .	1,903.9	2,060.0	2,169.8	2,195.8	2,235.6	2,284.9
\$50 . . . . .	1,757.8	2,190.7	2,718.2	3,216.4	3,450.4	3,420.5
\$100 . . . . .	—	—	—	—	595.6	1,542.4
<b>Total . . . . .</b>	<b>4,586.1</b>	<b>5,187.3</b>	<b>5,837.5</b>	<b>6,362.2</b>	<b>7,204.5</b>	<b>8,182.1</b>
<i>Held by banks . . . . .</i>	<i>500.9</i>	<i>578.1</i>	<i>677.4</i>	<i>712.6</i>	<i>786.7</i>	<i>833.3</i>
<i>Held by public . . . . .</i>	<i>4,085.2</i>	<i>4,609.2</i>	<i>5,160.1</i>	<i>5,649.6</i>	<i>6,417.8</i>	<i>7,348.8</i>

#### AUSTRALIAN DECIMAL COIN: NET ISSUES BY RESERVE BANK

(\$ million)

	<i>Year ended, June</i>					
	1980	1981	1982	1983	1984	1985
1c . . . . .	1.3	1.5	1.4	1.2	1.0	1.1
2c . . . . .	2.4	2.9	2.7	1.7	1.4	1.5
5c . . . . .	4.4	5.1	5.0	3.4	3.5	2.7
10c . . . . .	4.9	5.8	6.2	4.3	5.2	—
20c . . . . .	11.8	14.8	12.8	9.0	6.9	(-)9.6
50c . . . . .	12.3	12.1	26.8	22.1	9.4	1.2
\$1 . . . . .	—	—	—	—	107.2	86.6
<b>Total . . . . .</b>	<b>37.0</b>	<b>42.1</b>	<b>54.9</b>	<b>41.7</b>	<b>134.6</b>	<b>83.5</b>

#### Volume of money

Statistics of the volume of money in the following table include notes and coins in the hands of the public, deposits of the public with trading banks (including the Reserve Bank) and deposits with all savings banks. Volume of money is a measure of specified financial assets held by the non-bank public.

The financial assets included in the volume of money in the table represent only part (albeit a major part) of the public's total holdings of liquid financial assets. An expanded view of the volume of money would include the public's holdings of such other claims as

finance company debentures, deposits and shares of building societies, loans to authorised dealers in the short-term money market, government securities, etc.

### VOLUME OF MONEY

(Source: Reserve Bank of Australia)

(\$ million)

Average of weekly figures for June	Notes and coins in the hands of public	Deposits of public with all trading banks			Deposits with all savings banks(c)	Total volume of money
		Current(a)	Fixed(a)	Certificates of deposits(b)		
1980 . . . . .	4,420	10,423	10,243	3,012	21,061	49,159
1981 . . . . .	4,977	11,650	13,767	1,966	23,028	55,387
1982 . . . . .	5,570	11,325	16,948	3,002	24,808	61,653
1983 . . . . .	6,078	11,803	18,676	3,248	29,568	69,373
1984 . . . . .	6,983	12,663	19,289	3,850	34,051	76,836
1985 . . . . .	8,009	14,986	24,082	5,644	37,519	90,240

(a) Excludes deposits of the Commonwealth and State Governments and inter-bank deposits. (b) Excludes holdings of the Commonwealth and State Governments and banks. (c) Interpolated 'weekly average' based on end-of-month figures.

## FINANCIAL LEGISLATION

### Commonwealth legislation for economic management

With Federation in 1901 the new Commonwealth Parliament was given power under Section 51 of the Commonwealth Constitution to legislate with respect to 'Banking, other than State Banking, also State Banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money'. For further details on the Constitution see Chapter 1. In 1911 the Commonwealth entered the field of banking with the establishment of the Commonwealth Bank of Australia, which conducted both trading bank and savings bank operations.

From 1911 to 1945 the functions of central banking became more and more the responsibility of the Commonwealth Bank and in 1945 the Commonwealth Parliament directed it to act as a central bank. In the ensuing period of economic growth and financial development, the need for effective regulatory control of finance through banks became increasingly recognised. During 1959 the Commonwealth Parliament enacted the following legislation:

- (a) The *Banking Act 1959* which applies to all banks operating in Australia, including the external territories of the Commonwealth, except State banks trading in their own State. The objects of the Act are:
  - (i) to provide a legal framework uniform throughout Australia for regulating the banking system;
  - (ii) to safeguard depositors of the banks from loss;
  - (iii) to provide for the co-ordination of banking policy under the direction of the Reserve Bank;
  - (iv) to control the volume of credit in circulation and bank interest rates; and
  - (v) to provide machinery for the control of foreign exchange.
- (b) The *Reserve Bank Act 1959* which provides for the constitution and management of the Reserve Bank of Australia, the administration of the *Banking Act 1959* and the management of the Australian note issue.
- (c) The *Commonwealth Banks Act 1959* which provides for the constitution and management of the Commonwealth Banking Corporation, Commonwealth Bank of Australia, Commonwealth Savings Bank of Australia, and the Commonwealth Development Bank of Australia.

Notwithstanding the provisions of the above legislation recent Australian Governments have sought to decrease the degree of regulation imposed on the Financial Sector, and on banking activity in particular. Specifically, controls on most bank interest rates and foreign exchange have been relaxed. In addition, sixteen new private banks have been invited to commence operations.

Information on more specific aspects of the growth and control of the banking industry is contained in earlier issues of the Year Book (Nos. 31, 37, 45, 46 and 61).

As a result of the further development of the financial market and the increasing significance in the market of the non-bank financial institutions such as finance companies,

building societies and money market dealers, the *Financial Corporations Act 1974* was introduced. The object of this Act is to assist the Government to achieve effective management of the Australian economy by providing a means for the examination and regulation of the activities of non-bank financial institutions having regard to economic stability, the maintenance of full employment, the efficient allocation of productive resources, the ensuring of adequate levels of finance for housing and the economic prosperity and welfare of the people of Australia. Details of the operation and application of the Act are given in Year Book No. 62, page 541.

#### **Other Commonwealth legislation directly affecting financial institutions**

*Insurance.* Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate with respect to 'insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned'. Commonwealth legislation includes the *Marine Insurance Act 1909* defining the limits of marine insurance and regulating the terms of contracts, etc.; the *Life Insurance Act 1945* generally regulating life insurance business in Australia; and the *Insurance Act 1973* generally regulating general (non-life) insurance business in Australia. The *Marine Insurance Act 1909* has limited application.

*Life Insurance Act 1945.* The objects of this Act are:

- (a) to replace all State legislation on the subject of life insurance except that relating to the life insurance operations of State government insurance offices within the State concerned, and to provide uniform legislation for the whole of Australia;
- (b) to appoint a Life Insurance Commissioner to exercise active supervision of the activities of life insurance companies, with a view to securing the greatest possible protection for policy holders; and
- (c) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

The Act came into operation on 20 June 1946. The Life Insurance Commissioner issues an annual report which contains detailed information on the operations of life insurance companies.

*Insurance Act 1973.* The objects of this Act are:

- (a) to appoint an Insurance Commissioner to exercise active supervision of the activities of companies conducting general (non-life) insurance business, apart from State government insurance whether or not extending beyond the limits of the State concerned and other organisations specified in the Act, with a view to securing the greatest possible protection for policy holders; and
- (b) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

The Act came into operation on 19 June 1973. The Insurance Commissioner issues an annual report which contains detailed information on the operations of insurance companies.

#### **State legislation**

In each State there exists legislation designed to regulate the activities and monitor the solvency position of particular types of financial institutions which operate on a co-operative basis and lend predominantly to members or consumers. In general, they form the groups covered later in this chapter under the headings of Permanent Building Societies, Co-operative Housing Societies and Credit Unions.

In some States there is also legislation for the incorporation of State government bodies which operate as banks or insurance offices. Though the regulations in Commonwealth legislation do not directly apply to these bodies, details of their operations have been included in the relevant parts of this chapter because they have agreed to supply information consistent with regulatory reports on a voluntary basis.

## **BANKS**

### **Reserve Bank of Australia**

The Reserve Bank of Australia preserved and continued in existence the original corporate body known as the Commonwealth Bank of Australia under the new name Reserve Bank of Australia.

The general functions of the Reserve Bank are set out in Section 10 of the *Reserve Bank Act 1959*, which states:

'It is the duty of the Board, within the limits of its powers, to ensure that the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia and that the powers of the Bank under this Act, the *Banking Act 1959*, and regulations under that Act are exercised in such a manner as, in the opinion of the Board, will best contribute to:

- (a) the stability of the currency of Australia;
- (b) the maintenance of full employment in Australia; and
- (c) the economic prosperity and welfare of the people of Australia'.

### Management

The policy of the Reserve Bank is determined by a Board consisting of the Governor (Chairman), the Deputy Governor, the Secretary to the Treasury, and seven other members appointed by the Governor-General. The Bank is managed by the Governor, who acts in accordance with the policy of the Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank.

### Central Banking Business

Under the *Commonwealth Bank Act 1911* and the war-time powers conferred by the National Security Regulations, the Commonwealth Bank gradually assumed the functions of a Central Bank. Part III of the *Commonwealth Bank Act 1945* formally constituted the bank as a Central Bank and granted the necessary powers to carry on the business of a Central Bank, these powers being carried through into the present Act constituting the Reserve Bank.

### Note Issue Department

The Note Issue Department, established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank, was maintained in the same form under the *Reserve Bank Act 1959*. The Reserve Bank may, through this Department, issue, re-issue and cancel Australian notes.

### Rural Credits Department

The Rural Credits Department, established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce, was continued in the same form under the *Reserve Bank Act 1959*. The Reserve Bank may, through this Department, make advances upon the security of primary produce placed under the legal control of the Bank, or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance is not to exceed one year.

### RESERVE BANK OF AUSTRALIA: LIABILITIES AND ASSETS (\$ million)

#### LIABILITIES

30 June—	Capital and reserve funds	Special reserve— IMF special drawing right	Australian notes on issue	Deposits of trading banks		Deposits of savings banks	All other liabilities	Total
				Statutory reserve deposit accounts	Other			
1980 . . . . .	4,062	390	4,549	1,376	10	553	1,068	12,007
1981 . . . . .	3,161	388	5,094	1,846	9	129	1,253	11,880
1982 . . . . .	2,553	352	5,838	2,118	23	195	1,667	12,747
1983 . . . . .	4,392	352	6,414	2,237	6	2	2,121	15,523
1984 . . . . .	4,266	305	7,237	2,409	13	1	2,658	16,888
1985 . . . . .	6,177	344	8,234	2,864	16	1	4,047	21,683

continued over

**RESERVE BANK OF AUSTRALIA: LIABILITIES AND ASSETS—continued**  
(*\$ million*)

**ASSETS**

<i>30 June—</i>	<i>Gold and foreign exchange (a)</i>	<i>Australian Government securities (b)</i>	<i>Loans advances, bills discounted</i>	<i>Bank premises (c)</i>	<i>All other assets</i>	<i>Total</i>
1980 . . . . .	5,504	5,198	608	112	585	12,007
1981 . . . . .	5,454	4,728	837	149	711	11,880
1982 . . . . .	6,519	4,771	573	160	724	12,747
1983 . . . . .	10,752	3,472	418	165	717	15,523
1984 . . . . .	12,261	2,872	749	170	837	16,888
1985 . . . . .	13,245	6,487	381	342	1,229	21,683

(a) Includes currency at short call and International Monetary Fund drawing rights. (b) Includes Treasury bills and Treasury notes. (c) At cost, less amounts written off.

**Trading Banks**

Commercial banking in Australia is conducted by twelve trading banks. Three large private trading banks, together with the Commonwealth Bank of Australia, are generally referred to as the major trading banks. These banks provide widespread banking facilities throughout Australia. The remaining eight banks comprise two overseas banks, three State-owned banks and three private banks.

The major trading banks are: Commonwealth Bank of Australia; Australia and New Zealand Banking Group; Westpac Banking Corporation; and the National Australia Bank Limited.

The other trading banks are: Bank of New Zealand; Banque Nationale de Paris; State Bank of New South Wales; State Bank of South Australia; The Rural and Industries Bank of Western Australia (General Banking Department); Australian Bank Ltd; Macquarie Bank Ltd; and Bank of Queensland Ltd.

**Liabilities and assets**

Balance sheet information contained in the following table does not relate to uniform accounting periods but rather to the balance dates of banks within the years shown.

**AUSTRALIAN TRADING BANKS(a): LIABILITIES AND ASSETS(b)**

(i \$ million)

**LIABILITIES**

	<i>Paid-up capital</i>	<i>Reserve funds (used in business of banks)(c)</i>	<i>Final dividend proposed</i>	<i>Balance of profit and loss account</i>	<i>Total share-holders' funds</i>	<i>Balances due to other banks</i>	<i>Deposits, bills payable and other liabilities</i>	<i>Total</i>
1979 . . . . .	693	1,203	56	146	2,098	2,914	33,511	38,523
1980 . . . . .	770	1,450	70	202	2,491	3,489	38,593	44,573
1981 . . . . .	859	1,719	90	304	2,972	4,218	45,661	52,852
1982 . . . . .	1,146	1,928	108	368	3,550	6,642	56,131	66,323
1983 . . . . .	1,292	2,255	117	297	3,961	7,695	63,320	74,976
1984 . . . . .	1,506	2,748	143	431	4,828	12,200	70,590	87,619

**ASSETS**

	<i>Coin, bullion, notes and cash at Reserve Bank</i>	<i>Money at short call overseas</i>	<i>Australian public securities</i>				<i>Other public securities</i>	<i>Other securities</i>	<i>Loans to authorised dealers in short-term money market</i>
			<i>Australian Government</i>		<i>Local and semi-government securities</i>	<i>Other securities</i>			
			<i>Treasury bills and notes</i>	<i>Other securities</i>					
1979 . . . . .	369	163	154	4,157	184	420	893	580	
1980 . . . . .	524	270	284	4,271	315	277	1,228	624	
1981 . . . . .	577	170	693	4,598	329	222	1,566	455	
1982 . . . . .	616	399	818	5,441	324	95	2,876	77	
1983 . . . . .	473	465	501	5,604	332	318	3,271	165	
1984 . . . . .	523	532	528	6,470	326	332	3,983	243	

For footnotes see end of table.



## AUSTRALIAN TRADING BANKS(a): LIABILITIES AND ASSETS(b)

(\$ million)

## ASSETS—continued

	Statutory reserve deposit account with Reserve Bank	Cheques and bills of, and balances with and due from other banks	Loans, advances and bills discounted	Bank premises, furniture and sites	Bills receivable and remittances in transit	All other assets	Total
1979 . . . . .	1,103	2,424	21,509	554	2,414	3,600	38,523
1980 . . . . .	1,374	2,772	24,706	596	1,841	5,492	44,573
1981 . . . . .	1,826	3,190	29,377	700	2,078	7,071	52,852
1982 . . . . .	2,096	4,565	35,827	817	2,281	10,091	63,323
1983 . . . . .	2,212	5,383	39,343	1,106	2,186	13,618	74,976
1984 . . . . .	2,482	8,109	44,138	1,364	1,302	17,287	87,619

(a) Excludes the overseas banks but includes the deposits and assets held against the deposits of the Savings Bank Division of the Rural and Industries Bank of Western Australia. (b) Relates to liabilities and assets both inside and outside Australia.

Figures shown in the table below are the averages of liabilities and assets within Australia (including external territories) of banks at the close of business on Wednesdays during the month of June for the years shown.

## ALL TRADING BANKS: AVERAGE LIABILITIES AND ASSETS WITHIN AUSTRALIA

(\$ million)

## LIABILITIES(a)(b)

Average of weekly figures for month of June	Deposits repayable in Australia						Total
	Fixed	Current		Total	Balances due to other banks	Bills payable and all other liabilities to the public	
		Bearing interest	Not bearing interest				
1980 . . . . .	14,756	1,248	9,640	25,643	790	5,555	31,989
1981 . . . . .	17,188	1,218	10,900	29,306	827	7,302	37,436
1982 . . . . .	21,614	1,261	10,628	33,503	1,140	11,194	45,837
1983 . . . . .	23,644	1,702	10,698	36,044	1,350	14,871	52,266
1984 . . . . .	24,925	2,135	11,364	38,424	1,997	19,100	59,521
1985 . . . . .	31,265	4,275	11,570	47,109	1,884	21,596	70,589

## ASSETS(b)

Average of weekly figures for month of June	Coin, bullion, notes and cash at Reserve Bank	Australian Government securities		Local and semi- govern- ment securities	Loans to author- ised dealers in short- term money market	Statutory reserve deposit account with Reserve Bank	Loans, advances and bills dis- counted	All other assets	Total
		Treasury bills and notes	Other securities						
		1980 . . . . .	486						
1981 . . . . .	550	840	4,416	220	265	1,854	22,998	8,708	39,851
1982 . . . . .	639	502	4,985	240	336	2,113	26,213	13,111	48,139
1983 . . . . .	620	538	5,395	123	193	2,238	28,687	16,858	54,653
1984 . . . . .	678	358	6,041	96	320	2,409	31,751	20,974	62,627
1985 . . . . .	748	1,118	6,535	457	311	2,861	39,173	25,511	76,716

(a) Excludes shareholders' funds. (b) Excludes inter-branch accounts and contingencies.

**Interest rates**

At 30 June 1985, rates of interest were:

	(Per cent per annum)
Fixed deposits (Less than \$50,000)	
30 days . . . . .	10.75
3 months . . . . .	11.00
6 months . . . . .	12.50
12 months . . . . .	12.50
24 months . . . . .	12.00
48 months . . . . .	12.00
Overdrafts	
Less than \$100,000. . . . .	14.50—15.50
\$100,000 and over . . . . .	16.75—17.75

**Branches and agencies**

At 30 June 1985 the major trading banks operated 4,515 branches, and the other trading banks 544 branches. Of the total 5,059 branches, 2,742 were located in metropolitan areas. Trading bank facilities were also available at 1,557 agencies throughout Australia.

**Debits to customer's accounts**

**TRADING BANKS: AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS<sup>(a)</sup>**  
(**\$ million**)

<i>June</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1980 . . . . .	10,516	7,855	2,108	1,021	1,499	268	76	240	23,584
1981 . . . . .	12,319	8,871	2,522	1,170	1,821	281	78	347	27,409
1982 . . . . .	17,918	13,027	3,448	1,700	2,501	334	96	568	39,593
1983 . . . . .	17,788	13,679	3,926	1,727	2,592	332	95	834	40,975
1984 . . . . .	26,971	19,075	5,389	2,124	3,449	402	167	1,223	58,800
1985 . . . . .	42,968	23,959	6,483	2,699	4,720	545	197	1,482	83,053

(a) Covers all trading banks and in addition the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank. Excludes debits to the Commonwealth and State Government accounts in capital cities.

More detailed statistics relating to trading banks may be found in the monthly publication *Major Trading Banks Australia* (5603.0), and the quarterly publication *Banking, Australia* (5605.0).

**Savings banks**

Savings bank business in Australia is conducted by twelve banks. These comprise:

- (i) subsidiaries of the four major trading banks; Commonwealth Savings Bank of Australia, Australia and New Zealand Savings Bank Limited, Westpac Banking Corporation Savings Bank Limited and National Australia Savings Bank Limited,
- (ii) three State-owned banks; State Bank of Victoria and the savings bank arms of the State Bank of South Australia and the Rural and Industries Bank of Western Australia,
- (iii) two private banks; Bank of Queensland Savings Bank Limited and Advance Bank Australia Limited.
- (iv) two trustee banks, the Savings Bank of Tasmania and Launceston Bank for Savings
- (v) one overseas bank; New Zealand Savings Bank Limited.

All savings banks, including trustee savings banks but not State savings banks, are subject to the *Banking Act 1959*.

**Liabilities and assets**

Balance sheet information contained in the following table does not relate to uniform accounting periods but rather to the balance dates of banks falling within the years shown.

## SAVINGS BANKS(a): LIABILITIES AND ASSETS(b)

(\$ million)

## LIABILITIES

	Paid-up capital	Reserve Funds (used in the business of the bank)(c)	Balance of profit and loss account	Total shareholders' funds	Depositors' balances	Balances due to other banks	Bills payable and all other liabilities	Total
1979 . . . . .	85	639	33	757	19,812	105	623	21,297
1980 . . . . .	92	737	42	871	21,277	110	732	22,991
1981 . . . . .	92	858	51	1,001	23,070	140	876	25,088
1982 . . . . .	91	917	66	1,073	24,919	303	1,330	27,625
1983 . . . . .	141	929	49	1,118	30,610	571	1,472	33,770
1984 . . . . .	130	1,418	96	1,643	34,296	895	1,317	38,150

## ASSETS

	Coin, bullion, notes and deposits with Reserve Bank	Deposits in Australia with trading banks	Australian public securities		Local and semi-government securities	Other securities	Total
			Commonwealth and State Governments				
			Treasury bills and notes	Other securities			
1979 . . . . .	851	259	595	2,469	5,304	53	53
1980 . . . . .	617	252	1,071	2,113	5,663	57	57
1981 . . . . .	268	304	1,553	2,170	6,029	66	66
1982 . . . . .	234	323	1,712	2,103	5,931	105	105
1983 . . . . .	200	438	1,142	4,184	6,862	246	246
1984 . . . . .	90	304	315	5,460	7,803	146	146

	Loans to authorised dealers in short-term money market	Cheques and bills of, and balances with and due from other banks(c)	Loans advances and bills discounted	Bank premises, furniture and sites	Bills receivable and remittances in transit	All other assets	Total
1980 . . . . .	179	407	11,931	366	70	266	22,991
1981 . . . . .	133	381	13,385	410	63	327	25,088
1982 . . . . .	116	502	15,200	449	384	567	27,625
1983 . . . . .	351	836	18,014	504	532	461	33,770
1984 . . . . .	271	906	20,688	924	680	563	38,150

(a) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (b) This table relates to liabilities and assets both inside and outside Australia. (c) Includes deposits with and loans to specified lenders other than trading banks.

## Branches and agencies

At 30 June 1985 the savings banks operated 5,650 branches and 9,892 agencies of which 3,181 branches and 4,524 agencies were in metropolitan areas.

More detailed statistics relating to trading banks may be found in the monthly publication *Savings Banks, Australia* (5602.0), and the quarterly publication *Banking, Australia* (5605.0).

## Development banks

## Commonwealth Development Bank of Australia

The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act 1959* and commenced operations on 14 January 1960. It was formed basically from an amalgamation of the Mortgage Bank and Industrial Finance Departments of the former Commonwealth Bank of Australia. The functions of the Development Bank are to provide finance for the purpose of primary production (which includes fishing, forestry

and all forms of rural activity) and for the establishment or development of small business undertakings (i.e. with shareholders'/proprietors' funds not exceeding \$5 million) in cases where such finance is not otherwise available on reasonable and suitable terms and conditions.

Two types of facility are provided—loans over medium to long terms and equipment finance over short terms. Loans to primary industry may be for all types of farm development; property purchase and restructuring of private mortgage debt. Loans to small businesses may be for establishment of new enterprises or for development of existing businesses in all sectors including manufacturing, retail and wholesale trade, transport, tourism, professions, entertainment and service industries. Equipment finance is provided for the acquisition of plant and vehicles for both primary industry and business undertakings. The Bank has widened its policy to lend for working capital and to re-finance loans from non-bank sources.

The Commonwealth Development Bank is managed by a General Manager under the Managing Director of the Commonwealth Banking Corporation and its policy is determined by the Board of that Corporation.

#### **Australian Resources Development Bank Limited**

The Australian Resources Development Bank Limited was established in 1967 with equity capital of \$3 million subscribed by the major trading banks. It was given the status of a bank under the *Banking Act 1959* and opened for business on 29 March 1968. The main object of the Australian Resources Development Bank is to assist Australian enterprises to participate more fully in the development of Australia's natural resources. It provides finance to enterprises engaged in major developmental projects by direct loans, investing in equity capital or by refinancing loans made by trading banks acting individually or as a group. The Australian Resources Development Bank obtains funds by accepting deposits and by borrowing on the Australian and overseas capital markets.

#### **The Primary Industry Bank of Australia Limited**

The Primary Industry Bank of Australia Limited commenced operations on 22 September 1978 under the authority of the *Primary Industry Bank Act 1977*. The Bank has also been brought within the scope of the *Banking Act 1959* including those provisions relating to the protection of depositors, advances policy, control of interest rates, furnishing of statistics, and alterations in the structure and ownership of the Bank.

The main objective of the Bank is to facilitate the provision of loans to primary producers for longer terms than are otherwise generally available. The Bank's role is restricted to refinancing loans made by banks and other financial institutions with terms of eight years or more but not exceeding thirty years.

The equity capital of the Bank is \$5,625,000 consisting of six shares. Five shares are held by the Commonwealth Government and the major trading banks while the sixth share is held equally by the four State banks.

## **REGISTERED BUILDING SOCIETIES**

### **Permanent building societies**

A permanent building society is defined as an organisation that: (a) is registered under relevant State or Territory legislation; (b) has not by its rules any fixed date or certain event or result when it is to terminate; (c) is authorised to accept money on deposit; and (d) operates on a co-operative basis by borrowing predominantly from its members and providing finance to its members principally in the form of housing loans.

In 1976 a statistical collection was introduced covering the financial accounts of permanent building societies in all States and Territories of Australia. The statistics below summarise information collected from the 88 permanent building societies balancing in the 1982-83 financial year. More detailed descriptions and dissections of these statistics may be found in the annual publication *Permanent Building Societies: Assets, Liabilities, Income and Expenditure, Australia* (5632.0).

Information relating to the housing finance operations of permanent building societies is provided on page 529 and in the monthly publication *Housing Finance for Owner Occupation, Australia* (5609.0).

Summary statistics on the assets and selected liabilities of permanent building societies registered under the *Financial Corporation Act 1974* are given on pages 522 and 523.

**PERMANENT BUILDING SOCIETIES:  
LIABILITIES AND ASSETS(a)**

(\$ million)

<i>Liabilities</i>	<i>1983-84</i>	<i>Assets</i>	<i>1983-84</i>
Share capital and reserves:		Amount owing on loans . . . . .	12,076.4
Non-withdrawable shares . . . . .	42.9	Cash on hand . . . . .	42.1
Withdrawable shares . . . . .	11,548.9	Deposits with—	
Reserves—		Banks . . . . .	478.7
Statutory . . . . .	190.9	Other . . . . .	232.1
Other(b) . . . . .	342.3	Bills, bonds and other securities . . . . .	4,398.5
Deposits . . . . .	5,086.1	Accounts receivable . . . . .	64.4
Loans . . . . .	470.1	Physical assets . . . . .	538.7
Accounts payable . . . . .	54.2	Other assets . . . . .	17.9
Other liabilities . . . . .	104.3	<b>Total assets</b> . . . . .	<b>17,839.7</b>
<b>Total liabilities</b> . . . . .	<b>17,839.7</b>		

(a) At the balance dates of societies within the financial year shown. (b) Includes accumulated surpluses and deficits.

**PERMANENT BUILDING SOCIETIES:  
INCOME AND EXPENDITURE**

(\$ million)

<i>Expenditure</i>	<i>1983-84</i>	<i>Income</i>	<i>1983-84</i>
Interest on:		Interest from:	
Shares . . . . .	1,101.5	Loans . . . . .	1,582.0
Deposits . . . . .	510.0	Deposits . . . . .	109.5
Loans . . . . .	28.3	Income from holdings of securities . . . . .	496.0
Wages and salaries . . . . .	142.3	Management fees . . . . .	32.9
Management fees(a) . . . . .	58.3	Other income . . . . .	46.1
Administrative expenses(b) . . . . .	156.1	<b>Total income</b> . . . . .	<b>2,266.5</b>
Insurance premiums paid . . . . .	3.2		
Other expenditure . . . . .	118.1		
<b>Total expenditure</b> . . . . .	<b>2,117.8</b>		

(a) Represents payments made by societies to separate management companies. (b) Includes Permanent Building Society Association costs, advertising, bank charges and other administrative expenses.

**Co-operative housing societies**

A co-operative housing society is defined as an organisation that: (a) is registered under the relevant State or Territory legislation; (b) is not authorised to accept money on deposit; (c) is only allowed to raise money on loans; (d) only provides finance to its members in the form of housing loans; and (e) does not cause or permit applicants for loans to ballot for precedence or in any way make the granting of a loan dependent on any chance or lot. The statistics below summarise information collected from the 2,684 co-operative housing societies balancing within the 1983-84 financial year. More detailed descriptions and dissections of these statistics may be found in the annual publication *Co-operative Housing Societies: Assets, Liabilities, Income and Expenditure, Australia* (5633.0).

**CO-OPERATIVE HOUSING SOCIETIES:  
LIABILITIES AND ASSETS(a)**

(\$ million)

<i>Liabilities</i>	<i>1983-84</i>	<i>Assets</i>	<i>1983-84</i>
Share capital(b) . . . . .	0.1	Amount owing on loans(b) . . . . .	1,640.7
Accumulated funds(c) . . . . .	24.7	Cash on hand and current accounts at banks . . . . .	11.6
Loans from:		Deposits with:	
Banks . . . . .	221.5	Banks . . . . .	7.6
Commonwealth/State Home Builders' Fund(d) . . . . .	989.7	Others . . . . .	23.2
Others . . . . .	441.4	Physical assets . . . . .	0.2
Other liabilities . . . . .	7.9	Other assets . . . . .	2.0
<b>Total liabilities</b> . . . . .	<b>1,685.4</b>	<b>Total assets</b> . . . . .	<b>1,685.4</b>

(a) At the balance dates of societies within the financial year shown. (b) Borrowing members' subscriptions have been offset against 'Amount owing on loans'. (c) Includes accumulated surpluses and deficits. (d) Refers to loans made through the Commonwealth/State Housing Agreements.

**CO-OPERATIVE HOUSING SOCIETIES:  
INCOME AND EXPENDITURE**

(\$ million)

<i>Expenditure</i>	<i>1983-84</i>	<i>Income</i>	<i>1983-84</i>
Interest paid on borrowing		Interest on:	
members' subscriptions . . . . .	2.0	Loans to members . . . . .	144.2
Interest on loans from:		Other . . . . .	2.6
Banks . . . . .	34.0	Management fees . . . . .	11.8
Other . . . . .	107.7	Other income . . . . .	3.6
Salaries and secretarial fees . . . . .	11.1	<b>Total income</b> . . . . .	<b>162.2</b>
Other expenditure . . . . .	4.5		
<b>Total expenditure</b> . . . . .	<b>159.3</b>		

**CREDIT UNIONS**

A credit union (or co-operative credit society) is defined as an organisation that: (a) is registered under relevant State or Territory legislation; and (b) operates on a co-operative basis by predominantly borrowing from and providing finance to its own members.

Credit union annual financial account statistics were first collected on a national basis from all registered credit unions for the year 1974-75 when there were 738 credit unions with a total of 909,547 members. The number of credit unions operating in 1983-84 was 530 with 1,971,086 members. Comprehensive financial account statistics are provided in the annual publication *Credit Unions: Assets, Liabilities, Income and Expenditure, Australia* (5618.0).

Statistics on the assets and selected liabilities of credit co-operatives registered under the *Financial Corporations Act 1974* which have assets in Australia exceeding \$5 million are provided on pages 522 and 523.

**CREDIT UNIONS: LIABILITIES AND ASSETS(a)**

(\$ million)

<i>Liabilities</i>	<i>1983-84</i>	<i>Assets</i>	<i>1983-84</i>
Share capital and reserves:		Amount owing on loans (c) . . . . .	3,426.6
Paid-up share capital . . . . .	16.8	Cash on hand . . . . .	20.8
Reserves—		Deposits with—	
Statutory . . . . .	50.7	Banks . . . . .	110.5
Other(b) . . . . .	129.6	Credit Union Leagues or Associations . . . . .	292.5
Deposits . . . . .	4,099.5	Other . . . . .	192.8
Loans . . . . .	83.1	Bills, bonds and other securities . . . . .	173.7
Accounts payable . . . . .	22.8	Accounts receivable . . . . .	24.4
Other liabilities . . . . .	17.2	Physical assets . . . . .	162.7
		Other assets . . . . .	15.5
<b>Total liabilities</b> . . . . .	<b>4,419.5</b>	<b>Total assets</b> . . . . .	<b>4,419.5</b>

(a) At the balance dates of credit unions within financial year shown. (b) Includes accumulated surpluses and deficits. (c) Net of unearned interest and allowance for doubtful debts.

**CREDIT UNIONS: INCOME AND EXPENDITURE**

(\$ million)

<i>Expenditure</i>	<i>1983-84</i>	<i>Income</i>	<i>1983-84</i>
Interest on		Interest from:	
Deposits . . . . .	391.1	Loans . . . . .	525.9
Loans . . . . .	3.5	Deposits . . . . .	78.1
Wages and salaries . . . . .	82.0	Income from holdings of securities . . . . .	15.9
Administration expenses (a) . . . . .	57.7	Management fees . . . . .	4.5
Insurance premiums paid . . . . .	8.9	Bad debts recovered . . . . .	1.7
Allowance for doubtful debts . . . . .	10.8	Other income . . . . .	17.1
Other expenditure (b) . . . . .	46.3	<b>Total income</b> . . . . .	<b>643.1</b>
<b>Total expenditure</b> . . . . .	<b>600.2</b>		

(a) Includes Financial Institutions duty. (b) Includes bank accounts debit tax.

## SHORT-TERM MONEY MARKET

### Authorised money market corporations

For some years prior to 1959 leading stockbrokers were actively engaged in operations which formed the basis of a short-term money market in Australia. The stockbrokers' operations involved the acceptance of short-term funds which were secured against government securities. These operations were severely limited by the lack of suitable short-term securities and by liquidity constraints. In February 1959 the Central Bank established the Official Short-Term Money Market by making available 'lender of last resort' facilities to selected dealers.

There are nine authorised money market dealers. They are required by the Reserve Bank to: (a) accept loans overnight, at call or for fixed periods, in minimum amounts of \$50,000 and invest these funds in Commonwealth Government and other approved securities; (b) at all times be willing traders in the buying and selling of approved securities; (c) have a minimum paid-up capital of \$400,000 and adhere to a maximum limit on the ratio of loans to shareholders' funds; and (d) consult regularly with the Reserve Bank on all money market matters and furnish detailed information about their portfolios, operations, interest rates, balance sheets and profit and loss accounts. Under the 'lender of last resort' arrangements, dealers may borrow from the Reserve Bank for a minimum of seven days and at a rate designed to discourage excessive recourse to the facility.

The following table contains details of selected liabilities and assets, and interest rates. Additional information on authorised dealers collected under the *Financial Corporations Act 1974* is provided on pages 522 and 523.

### SHORT-TERM MONEY MARKET: SELECTED LIABILITIES AND ASSETS AND INTEREST RATES OF AUTHORISED DEALERS

(Source: Reserve Bank of Australia)

Month	Liabilities to clients		Asset holdings (face value)				Interest rates on loans accepted during month				Weighted average interest rate on loans outstanding (c)	
			C'wealth Govt securities	Com-mercial bills(b)	Banks certifi-cates of deposit	At call		For fixed periods				
	All trading banks	Other clients				Total	Mini-mum	Maxi-mum	Mini-mum	Maxi-mum		
	Average of weekly figures—(\$ million)					Per cent per annum						
June—												
1980 . . .	384	1,114	1,498	1,274	229	58	1.00	18.80	5.50	13.00	10.34	
1981 . . .	265	1,122	1,387	1,395	258	25	5.00	21.60	11.75	15.00	13.04	
1982 . . .	336	1,038	1,374	1,047	265	85	1.00	26.10	4.00	19.25	14.88	
1983 . . .	193	1,303	1,496	1,100	361	177	1.00	25.00	2.00	15.00	9.76	
1984 . . .	320	1,289	1,609	1,181	449	231	1.00	17.46	4.00	13.75	11.42	
1985 . . .	311	913	1,224	818	306	213	10.00	30.00	13.00	17.50	15.07	

(a) Within 5 years of maturity. (b) Accepted or endorsed by banks. (c) Weighted average of rates paid on all days of the four or five weeks ending on the last Wednesday of the month.

### Money market corporations

There are also companies without Reserve Bank 'lender of last resort' facilities which operate in a similar manner to authorised dealers. These companies are recognised under the *Financial Corporations Act 1974* in the category of money market corporations. This category consists of registered corporations whose short-term borrowings are a substantial proportion of their total outstanding provision of finance, which is mainly in the form of loans to authorised dealers in the short-term money market and other liquidity placements, business loans and investments in Government, commercial and corporate paper.

The category of money market corporations also includes registered corporations providing short-term finance but which are themselves financed by related corporations with funds raised on a short-term basis, as well as corporations which borrow principally short-term and lend predominantly to related money market corporations.

Statistics on money market corporations registered under the *Financial Corporations Act 1974* are contained in the tables on pages 522 and 523.

## FINANCE COMPANIES

Information presented on finance companies in Australia in the following tables has been compiled from returns collected under the *Census and Statistics Act 1905*. For the purpose of these statistics, a finance company is defined as an incorporated company which is, or a group of incorporated companies related under Section 7 of the *Companies Act 1981*, each of which is, mainly engaged in providing to the general public (businesses as well as persons in their private capacity) any of the following types of credit facilities: instalment credit for retail sales; personal loans; wholesale finance; factoring; other consumer and commercial loans; finance leasing of business plant and equipment and bills of exchange transactions. A company is mainly engaged in providing these types of credit facilities if 50 per cent or more of its assets consist of balances outstanding with respect to such facilities, or if 50 per cent or more of its income is derived from such facilities.

The statistics for the financial year relate to those finance companies which have balances outstanding net of unmatured income in the prescribed types of credit facilities of \$5 million or more in total on an Australia-wide basis. The 1983-84 annual census of finance companies indicated that companies thus included accounted for 99.1 per cent of the total net balances outstanding on prescribed credit facilities of all finance companies.

More detailed descriptions and dissections of these statistics may be found in the annual publication *Finance Companies: Assets, Liabilities, Income and Expenditure, Australia* (5616.0).

Due to differences in coverage and classification criteria and definitions of data items the statistics for finance companies shown below are not comparable with the statistics, compiled from returns submitted under the *Financial Corporations Act 1974*, for finance companies and general financiers contained in the tables on pages 522 and 523.

FINANCE COMPANIES: ASSETS, LIABILITIES, INCOME AND EXPENDITURE<sup>(a)</sup>  
(\$ million)

	1981-82	1982-83	1983-84
<b>Assets—</b>			
Balances outstanding on finance agreements <sup>(b)</sup> . . . . .	20,573.1	22,855.4	22,927.7
Cash on hand and bank deposits . . . . .	32.2	99.1	64.5
Loans to authorised money market dealers . . . . .	19.4	11.7	10.6
Investments in shares and securities. . . . .	354.0	452.6	548.8
Physical assets . . . . .	208.6	227.8	266.4
Other assets . . . . .	389.3	507.0	514.5
<b>Total assets</b> . . . . .	<b>21,576.7</b>	<b>24,153.6</b>	<b>24,332.3</b>
<b>Liabilities—</b>			
Paid-up capital . . . . .	1,305.7	1,348.2	1,551.9
Reserves . . . . .	582.8	661.9	702.5
Unappropriated profits . . . . .	551.3	645.1	809.6
<b>Borrowed funds—</b>			
Bank loans and overdrafts . . . . .	419.6	435.5	456.4
Debentures . . . . .	8,255.5	9,810.2	10,220.0
Secured and unsecured loans . . . . .	8,696.1	9,273.0	8,726.1
Other liabilities . . . . .	1,765.7	1,979.9	1,865.8
<b>Total liabilities</b> . . . . .	<b>21,576.7</b>	<b>24,153.6</b>	<b>24,332.3</b>
<b>Income for year—</b>			
Interest from finance agreements . . . . .	3,210.9	4,010.0	4,085.7
Other income . . . . .	199.7	252.4	313.7
<b>Total income</b> . . . . .	<b>3,410.6</b>	<b>4,262.4</b>	<b>4,399.5</b>
<b>Expenditure for year—</b>			
Interest on borrowed funds . . . . .	2,160.8	2,758.8	2,773.5
Wages, salaries and allowances, directors fees and emoluments . . . . .	288.5	340.9	370.4
Other expenditure . . . . .	538.6	712.4	706.0
<b>Total expenditure</b> . . . . .	<b>2,987.9</b>	<b>3,812.3</b>	<b>3,849.9</b>

(a) At the balance date of companies within the financial year shown. (b) Excludes unmatured income of \$5,427.8m in 1981-82, \$6,054.9m in 1982-83 and \$6,064.3m in 1983-84.



## FINANCIAL CORPORATIONS STATISTICS

The statistics provided in the following tables have been compiled from returns supplied to the Australian Bureau of Statistics by corporations registered under the *Financial Corporations Act 1974* (FCA). A summary of the objects and content of the Financial Corporations Act is given in Year Book No. 62, page 541.

More detailed descriptions and dissections of these statistics may be found in the monthly publications *Building Societies, Australia* (5637.0); *Authorised Dealers and Money Market Corporations, Australia* (5638.0); *Financial Companies Act, Australia* (5639.0) and *Other Registered Corporations, Australia* (5640.0).

Descriptions of the categories *building societies*, *credit unions/co-operatives*, *authorised money market dealers* and *money market corporations* appear in the respective parts of this chapter. Descriptions of the other categories are as follows:

*Pastoral finance companies*—comprising corporations whose provision of finance is predominantly in the form of loans to rural producers largely associated with the provision of rural services.

*Finance companies*—comprising corporations which rely substantially on borrowings in financial markets in Australia and/or from abroad and whose provision of finance is predominantly in the form of business and commercial lending, instalment credit to finance retail sales by others and/or other loans to individuals.

*General financiers*—comprising corporations which lend predominantly for business and commercial purposes, instalment credit to finance retail sales by others and/or other loans to individuals but which do not rely substantially on borrowings in financial markets in Australia and from abroad.

*Intra group financiers*—comprising corporations which predominantly borrow within a corporation group and/or provide finance by lending within their corporation group or by investing in financial markets.

*Other financial corporations*—comprising registered corporations not included in any other specific category.

### FINANCIAL CORPORATIONS, AUSTRALIA: SELECTED LIABILITIES AND ASSETS<sup>(a)</sup> (\$ million)

#### SELECTED LIABILITIES AS AT 30 JUNE 1985

Category	Borrowings from—					Non-residents
	Residents					
	By acceptance of bills of exchange and promissory notes	Related corporations (b)	Banks	Other		
Building societies . . . . .	14.7	67.0	298.4	17,026.1	12.1	
Credit co-operatives . . . . .	n.a.	n.a.	28.7	4,698.4	n.a.	
Authorised money market dealers . . . . .	n.a.	19.5	1,258.7	552.5	—	
Money market corporations . . . . .	592.8	744.9	1,177.0	14,245.3	3,597.2	
Pastoral finance companies . . . . .	42.5	1,806.0	168.5	501.6	582.9	
Finance companies . . . . .	510.9	761.2	1,173.6	18,776.8	1,178.3	
General financiers . . . . .	105.4	353.7	569.9	1,328.1	255.5	
Intra group financiers . . . . .	—	1,268.4	186.9	1,420.7	878.9	
Other financial corporations . . . . .	6.5	—	2.0	362.3	—	
<b>Total . . . . .</b>	<b>1,272.8</b>	<b>5,020.7</b>	<b>4,863.2</b>	<b>58,911.8</b>	<b>6,504.9</b>	

For footnotes see end of table

## FINANCIAL CORPORATIONS, AUSTRALIA: SELECTED LIABILITIES AND ASSETS(a)—continued

(\$ million)

## ASSETS IN AUSTRALIA AT 30 JUNE 1985

Category	Loans to author- ised dealers in the STMM and other		Government and public authority securities	Bills of exchange and promis- sory notes purchased and held(d)	Other secur- ities	Other assets arising from the provision of All other finance assets in (e) Australia		Assets overseas	Total assets
	Cash place- and bank deposits(c)	ments and de-							
Building societies . . . . .	861.4	260.5	1,486.8	1,476.0	115.6	13,609.4	680.5	—	18,490.1
Credit co-operatives . . . . .	128.0	392.3	83.1	70.3	29.5	4,131.2	244.8	0.3	5,079.3
Authorised money market dealers . . . . .	309.6	1.7	1,237.0	349.1	1.3	0.8	14.2	—	1,913.8
Money market corporations . . . . .	1,350.4	6,072.0	337.0	5,023.6	756.3	7,639.0	1,446.7	426.7	23,051.8
Pastoral finance companies . . . . .	21.6	55.1	—	—	557.0	2,827.2	501.7	2.9	3,965.5
Finance companies . . . . .	231.0	552.4	17.4	497.7	477.4	24,149.4	653.8	87.9	26,667.0
General financiers . . . . .	41.3	199.1	57.2	107.3	149.7	2,715.2	475.4	6.7	3,751.8
Intra group financiers . . . . .	1.7	168.5	0.2	10.5	136.2	3,393.0	234.1	202.6	4,146.7
Other financial corporations . . . . .	71.8	48.0	27.0	166.2	1.9	62.4	18.3	—	395.6
<b>TOTAL . . . . .</b>	<b>3,016.8</b>	<b>7,749.6</b>	<b>3,245.7</b>	<b>7,700.7</b>	<b>2,224.9</b>	<b>58,527.6</b>	<b>4,269.5</b>	<b>727.1</b>	<b>87,461.6</b>

(a) Excludes credit co-operatives and general financiers with assets not exceeding \$5 million. (b) Excludes related corporations in the same FCA category. (c) Includes short-term placements that are repayable at call or within 90 days; excludes funds placed with banks, and purchases of government securities and bills of exchange. (d) Excludes bills that have been drawn or accepted by reporting corporations. (e) Includes holdings of bills that have been drawn by reporting corporations and loans that have been re-financed by the sale of bills accepted by reporting corporations.

## CASH MANAGEMENT TRUSTS

A monthly statistical collection was introduced in May 1983 to obtain information on the operations of cash management trusts. A cash management trust is a unit trust which is governed by a trust deed, is open to the public, generally confines its investments to financial securities available through the short term money market, and whose units are redeemable by the trustee to the unit holder on demand.

The following table summarises the financial operations of cash management trusts.

## CASH MANAGEMENT TRUSTS

Quarter	Number of Trusts	Weighted average		Assets (\$ million)					Total assets
		Units in issue at end of period \$ million	net yield at end of period % per annum	Cash and deposits with banks	All other deposits and loans	Bills of exchange purchased and held	Promissory Notes purchased and held	Other assets	
1983-84—									
March . . . . .	15	1,525.2	11.21	133.4	412.5	786.7	184.2	43.0	1,559.9
June . . . . .	16	1,438.4	12.01	78.8	329.7	907.3	128.7	31.8	1,476.3
1984-85—									
September . . . . .	16	1,585.5	10.85	82.3	372.5	975.0	146.1	38.0	1,613.9
December . . . . .	16	1,538.0	10.61	63.0	303.0	994.8	153.1	54.2	1,568.1
March . . . . .	15	1,504.4	12.99	92.7	359.1	781.8	262.9	39.8	1,536.4
June . . . . .	15	1,524.5	14.46	163.3	400.1	800.4	173.6	23.2	1,560.5

## LIFE INSURANCE

Statistics in the following tables have been derived from the publications of the Life Insurance Commissioner and relate to the life insurance business of companies with head offices in Australia and the Australian business of companies with head offices overseas. Also included are the life business operations voluntarily reported by three State Government Insurance Offices.

Forty-eight life offices conducted life insurance business in Australia during 1984.

Information contained in the following three tables does not relate to uniform accounting periods but to the balance dates of organisations falling within the calendar year shown.

## LIFE INSURANCE OFFICES: LIABILITIES AND ASSETS

(\$ million)

	1982	1983	1984
<b>Liabilities—Australia and overseas—</b>			
Total balances of revenue accounts at end of year . . . . .	21,563.5	24,946.7	27,624.6
Reserves . . . . .	269.4	279.0	698.9
<b>Total</b> . . . . .	<b>21,832.9</b>	<b>25,225.7</b>	<b>28,323.5</b>
<b>Other liabilities—</b>			
Bank overdraft . . . . .	153.2	109.5	280.9
Deposits . . . . .	117.5	156.3	242.8
Claims admitted . . . . .	144.8	142.7	165.4
Sundry creditors . . . . .	153.4	261.9	233.8
Provisions for taxation . . . . .	388.6	502.2	791.2
Provision for superannuation and long-service leave . . . . .	49.2	57.9	54.0
Miscellaneous liabilities . . . . .	237.1	95.4	83.8
<b>Total liabilities</b> . . . . .	<b>23,076.7</b>	<b>26,551.6</b>	<b>30,175.6</b>
<b>Assets—Australia and overseas—</b>			
Property and fixed assets . . . . .	5,386.5	5,815.1	5,660.3
Loans . . . . .	3,054.3	2,999.4	3,298.5
Investment . . . . .	13,587.8	16,380.7	19,372.0
Cash and deposits . . . . .	284.8	380.5	766.0
Outstanding premiums including advances of premiums . . . . .	327.1	344.0	368.7
Outstanding interest, dividends and rents . . . . .	332.1	380.1	423.3
Sundry debtors . . . . .	71.5	210.8	221.5
Miscellaneous assets . . . . .	32.6	41.0	65.3
<b>Total assets</b> . . . . .	<b>23,076.7</b>	<b>26,551.6</b>	<b>30,175.6</b>

## LIFE INSURANCE OFFICES: REVENUE AND EXPENDITURE

(\$ million)

	1982	1983	1984
<i>Balance of Revenue Account at beginning of year—Australia and overseas</i> . . . . .	<i>19,161.4</i>	<i>21,563.5</i>	<i>24,950.9</i>
<b>Revenue—</b>			
Single premiums . . . . .	320.3	455.2	977.6
Other premiums . . . . .	3,049.1	3,331.3	3,443.5
Net interest . . . . .	1,782.7	1,954.3	2,229.0
Net conversion and transfer values-in . . . . .	13.8	2.7	35.9
Net transfers from reserves and provisions within fund . . . . .	-45.0	-2.6	-433.8
Other net transfers within statutory fund-in . . . . .	—	—	—
Net profit (or loss) on realisation or revaluation of assets . . . . .	433.6	1,457.6	1,191.9
Miscellaneous income . . . . .	92.7	-91.2	-840.7
<b>Total revenue</b> . . . . .	<b>5,647.3</b>	<b>7,107.3</b>	<b>6,603.4</b>
<b>Total</b> . . . . .	<b>24,808.7</b>	<b>28,670.8</b>	<b>31,554.3</b>
<b>Expenditure—</b>			
Claims by death and disability . . . . .	472.6	506.5	536.8
Claims by maturity . . . . .	711.4	918.5	757.8
Surrenders and bonuses in cash . . . . .	1,175.5	1,250.9	1,440.3
Annuities . . . . .	14.8	16.4	15.8
Commissions . . . . .	352.1	386.3	435.1
Salaries . . . . .	256.4	275.4	284.5
Contribution to staff superannuation . . . . .	50.8	54.0	54.6
Taxes (other than those charged on interest dividends and rents) . . . . .	25.3	32.1	33.0
Other expenses . . . . .	220.9	257.1	275.9
Transfer out of statutory fund . . . . .	-34.6	26.8	95.8
<b>Total expenditure</b> . . . . .	<b>3,245.2</b>	<b>3,724.0</b>	<b>3,929.6</b>
<i>Balance of Revenue Account at end of year—Australia and overseas</i> . . . . .	<i>21,563.5</i>	<i>24,946.7</i>	<i>27,624.6</i>
<b>Total</b> . . . . .	<b>24,808.7</b>	<b>28,670.8</b>	<b>31,554.3</b>

## LIFE INSURANCE: SUMMARY

<i>Insurance and endowment policies</i>				
	<i>Number of policies ( '000)</i>	<i>Sum insured (\$ million)</i>	<i>Business issued by single premiums (\$ million)</i>	<i>Annual premiums (\$ million)</i>
<b>ORDINARY AND INDUSTRIAL BUSINESS</b>				
New policies issued—				
1982 . . . . .	412	15,454.0	115.3	144.1
1983 . . . . .	527	17,959.0	310.8	175.9
1984 . . . . .	603	20,330.0	600.1	222.2
Policies discounted or reduced (a)—				
1982 . . . . .	734	9,952.0	..	126.8
1983 . . . . .	683	11,015.0	..	127.2
1984 . . . . .	646	11,381.0	..	127.8
Policies existing at end of—				
1982 . . . . .	6,119	81,559.0	..	970.2
1983 . . . . .	5,963	88,503.0	..	1,018.9
1984 . . . . .	5,920	97,452.0	..	1,113.3
<b>SUPERANNUATION BUSINESS</b>				
New policies issued—				
1982 . . . . .	190	24,113.5	196.0	494.2
1983 . . . . .	155	20,711.0	175.8	442.7
1984 . . . . .	160	21,931.0	407.9	488.0
Policies discontinued or reduced (a)—				
1982 . . . . .	86	10,051.0	..	220.4
1983 . . . . .	75	15,778.0	..	258.0
1984 . . . . .	76	11,415.0	..	329.1
Policies existing at end of—				
1982 . . . . .	997	77,922.0	..	1,664.6
1983 . . . . .	1,077	82,855.0	..	1,849.3
1984 . . . . .	1,161	93,371.0	..	2,008.2

(a) Includes net transfers and conversions off.

## GENERAL INSURANCE

Statistics in the following tables have been derived from the publications of the Insurance Commissioner and returns collected under the *Census and Statistics Act 1905*. They measure the direct insurance of Australian risks. The statistics relate to the operations of:

- (a) *Bodies corporate* authorised to carry on insurance business under the *Insurance Act 1973*;
- (b) *Brokers* in respect of business placed with overseas insurers; and
- (c) *Government instrumentalities*, i.e. State Government Insurance Offices and Commonwealth Government and State Government instrumentalities in respect of their general insurance business.

These statistics are based on the following definitions:

*Premiums* comprise the full amount receivable in respect of direct insurance and facultative reinsurance business written or renewed within Australia (including business placed overseas by Australian brokers) during the year less (a) outward facultative reinsurance within Australia. (b) stamp duty and fire service charges paid, and (c) returns, rebates and bonuses paid or credited to policy holders. Premiums are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts differ from 'earned premium income' appropriate to the year.

*Claims* comprise, for direct insurance and facultative reinsurance business, payments made during the year plus the estimated amount of outstanding claims at the end of the year less the estimated amount of outstanding claims at the beginning of the year. Salvage and other amounts recoverable have been deducted.

In many instances brokers have no knowledge of claims made by the insured on overseas insurers in respect of business placed through them. Because of this, no details of claims are collected from brokers.

Information contained in the following tables does not relate to uniform accounting periods but to the financial years of the organisations which ended during the years shown.

**GENERAL INSURANCE: PREMIUMS AND CLAIMS BY  
PRINCIPAL CLASS OF BUSINESS**

(\$ million)

<i>Class of business</i>	<i>1981-82</i>	<i>1982-83</i>	<i>1983-84</i>
<b>PREMIUMS(a)</b>			
Fire(b) . . . . .	352.8	382.1	434.4
House Owners' and House-holders . . . . .	459.8	559.0	626.4
Contractors' All Risks . . . . .	39.1	44.3	57.9
Marine and Aviation . . . . .	139.7	147.7	163.6
Motor Vehicle Comprehensive . . . . .	1,042.2	1,224.9	1,269.2
Compulsory Third Party (Motor Vehicle) . . . . .	910.4	1,035.8	1,175.3
Employers Liability(c) . . . . .	1,175.8	1,755.0	2,003.4
Public Liability(d) . . . . .	170.7	225.1	229.1
All other . . . . .	430.8	487.4	536.8
<b>Total . . . . .</b>	<b>4,721.3</b>	<b>5,861.3</b>	<b>6,496.2</b>
<b>CLAIMS(e)</b>			
Fire(b) . . . . .	262.7	332.2	262.1
House Owners' and House-holders . . . . .	273.9	374.8	357.1
Contractors' All Risks . . . . .	30.4	24.3	22.0
Marine and Aviation . . . . .	105.8	97.0	110.1
Motor Vehicle Comprehensive . . . . .	861.4	918.8	947.6
Compulsory Third Party (Motor Vehicle) . . . . .	1,107.9	1,402.0	1,982.0
Employers Liability(c) . . . . .	1,324.8	1,551.8	1,778.0
Public Liability(d) . . . . .	107.8	119.1	197.5
All other . . . . .	215.5	242.4	254.6
<b>Total . . . . .</b>	<b>4,290.1</b>	<b>5,062.4</b>	<b>5,911.0</b>

(a) Includes premiums received by brokers 1981-82, \$94.7 million; 1982-83, \$145.1 million; 1983-84, \$193.3 million. (b) Includes sprinkler leakage, loss of profits, and crop and hailstone insurance. (c) Excludes workers' compensation insurance in the coal mining industry in N.S.W. (d) includes product liability and professional indemnity insurance. (e) Excludes brokers.

## SUPERANNUATION FUNDS AND SCHEMES

The following statistics have been compiled from the Census of superannuation funds, 1982-83. Detailed definitions from the census are provided in ABS publications *Census of Superannuation Funds, Australia 1982-83* (5636.0) and *Public Authority Pension and Superannuation Schemes, Australia* (5511.0).

The census of superannuation funds included superannuation schemes and funds whose primary purpose is to provide benefits on retirement of the following types:

Private sector funds:

    Restricted membership funds:

        Employees' funds

        Self-employed persons' one member funds

        Self-employed persons' group funds

    Open funds

Public sector funds and schemes;

    Self-administered funds

    Life insurance offices funds and schemes

Excluded from the census were:

- (a) Private sector funds that were wholly administered by life insurance offices,
- (b) Superannuation arrangements in the private sector that are unfunded (i.e. where the benefits are met from the employer's resources as they are payable), and
- (c) Public sector schemes funded from Consolidated Revenue.

**PRIVATE SECTOR FUNDS AND PUBLIC SECTOR SELF-ADMINISTERED FUNDS: INCOME,  
EXPENDITURE, ASSETS, LIABILITIES, MEMBERS AND PENSIONERS, 1982-83**

	Private sector funds				Total private sector	Public sector self admin- istered funds	Total
	Restricted membership			Open funds			
	Self-employed						
	Employees	One member	Group				
	(\$ million)						
<b>Income—</b>							
Contributions—							
Employees . . . . .	423.2	0.3	4.2	21.0	448.7	725.9	1,174.6
Employers . . . . .	971.7	0.3	—	—	972.0	1,244.2	2,216.2
Interest, dividends and rent . . . . .	1,126.7	0.4	5.4	13.9	1,146.4	998.8	2,145.2
Other Income . . . . .	539.0	—	2.1	4.1	545.2	188.8	734.0
<b>Total income . . . . .</b>	<b>3,060.6</b>	<b>1.0</b>	<b>11.7</b>	<b>39.0</b>	<b>3,112.3</b>	<b>3,157.7</b>	<b>6,270.0</b>
<b>Expenditure—</b>							
Pensions . . . . .	99.7	—	—	—	99.7	586.1	685.8
Lump sum payments . . . . .	1,430.6	1.3	5.5	25.3	1,462.7	776.8	2,239.5
Other expenditure . . . . .	344.0	—	0.7	4.6	349.3	135.7	485.0
<b>Total expenditure . . . . .</b>	<b>1,874.3</b>	<b>1.3</b>	<b>6.2</b>	<b>29.9</b>	<b>1,911.7</b>	<b>1,498.6</b>	<b>3,410.3</b>
<b>Assets—</b>							
Cash and savings and trading bank deposits . . . . .	339.0	0.7	1.0	1.4	342.1	110.6	452.7
Placements with authorised dealers in the short term money market . . . . .	124.5	—	20.8	1.8	147.1	50.9	198.0
Other placements and deposits . . . . .	387.7	0.1	3.2	1.8	392.8	386.6	779.4
Bills of exchange and promissory notes held . . . . .	178.0	—	—	—	178.0	328.1	506.1
Government and public authority securities . . . . .	3,168.8	1.1	45.4	13.9	3,229.2	4,137.1	7,366.3
Other securities . . . . .	3,284.4	0.3	51.6	16.7	3,353.0	1,689.9	5,042.9
Financial lease receivables . . . . .	14.9	—	—	—	14.9	20.3	35.2
Loan outstandings . . . . .	834.2	0.7	19.2	3.8	857.9	1,172.4	2,030.3
Other assets . . . . .	3,515.9	2.5	92.0	21.8	3,632.2	2,923.6	6,555.8
<b>Total assets . . . . .</b>	<b>11,847.4</b>	<b>5.4</b>	<b>233.2</b>	<b>61.2</b>	<b>12,147.2</b>	<b>10,819.5</b>	<b>22,966.7</b>
<b>Liabilities—</b>							
Accumulated Funds . . . . .	11,687.5	5.3	229.2	60.8	11,982.8	10,686.9	22,669.7
Accounts payable and other liabilities . . . . .	159.9	0.1	4.0	0.4	164.4	132.6	297.0
<b>Total liabilities . . . . .</b>	<b>11,847.4</b>	<b>5.4</b>	<b>233.2</b>	<b>61.2</b>	<b>12,147.2</b>	<b>10,819.5</b>	<b>22,966.7</b>
Members at last balance date (No.) . . . . .	728,511	588	10,417	76,481	815,997	749,129	1,565,126
Pensioners at last balance date (No.) . . . . .	27,462	—	—	—	27,462	114,405	141,867
Funds (No.) . . . . .	17,205	602	94	18	17,919	81	18,000

**PUBLIC SECTOR LIFE INSURANCE OFFICE INVESTED SCHEMES:  
INCOME, EXPENDITURE AND MEMBERSHIP 1982-83**

	(\$ million)	
<b>Income—</b>		
Contributions—		
Members . . . . .		25.6
Employers . . . . .		43.7
Other income . . . . .		45.4
<b>Total income . . . . .</b>		<b>114.7</b>
<b>Expenditure—</b>		
Pensions . . . . .		1.5
Lump sum payments . . . . .		39.4
Other expenditure . . . . .		72.3
<b>Total expenditure . . . . .</b>		<b>113.2</b>
Members at last balance date (No.) . . . . .		29,948
Funds (No.) . . . . .		222

## HOUSING FINANCE FOR OWNER OCCUPATION

A monthly statistical series was introduced in October 1975 to provide information on finance (secured by mortgage or other security, including secured personal loans and loans secured by contracts of sale) and commitment by significant lenders to individuals for the construction or purchase of dwellings for owner occupation. From July 1984, a new criterion to determine a significant lender was adopted i.e. the lender had committed finance to individuals of \$1.7 million during the year 1982-83 for the construction or purchase of dwellings for owner occupation. At the same time the term 'lending commitments' was also adopted in lieu of loans approved but conceptually there is no difference in the terms. Due to the new criterion there is a break in the statistical series but the break is statistically insignificant.

The types of lenders considered in the statistics are trading and savings banks, permanent building and co-operative housing societies, finance companies, government authorities, insurance companies and credit unions.

The following tables provide information classified by type of lender and the use for which finance commitments are intended (e.g. construction or purchase).

*Purchase of newly erected dwellings* represents the purchase of dwellings which have been completed or will be completed within a period of twelve months preceding the date of purchase and where the purchaser is, or will be, the first occupant.

*Purchase of established dwellings* represents the purchase of dwellings which have been completed for a period of greater than twelve months preceding the date of purchase or, if completed within twelve months, where the purchaser is not the original occupant.

The term *dwelling* includes houses and other dwellings where the latter is defined as a self-contained dwelling unit other than a house. (Examples of *other dwellings* are flats, home units, semi-detached cottages, villa units, town houses, etc.)

The term *number of dwelling units* refers to the number of houses and other dwellings for which finance commitments are secured by contract of sale or first mortgage only.

Comprehensive statistics on housing finance for owner occupation are available in the monthly publication *Housing Finance for Owner Occupation, Australia* (5609.0).

The following table summarises the housing finance operations of the significant lenders.

### HOUSING FINANCE FOR OWNER OCCUPATION

(\$ million)

	<i>Finance commitments for—</i>			<i>Commitments advanced (a)</i>	<i>Commitments not advanced (a)</i>
	<i>Construction or purchase of dwellings</i>	<i>Alterations and additions</i>	<i>Cancellations of commitments</i>		
1982-83 . . . . .	7,171.2	510.1	283.3	6,078.1	1,316.6
1983-84 . . . . .	10,640.6	640.5	379.3	8,938.3	2,043.0
1984-85 . . . . .	12,919.8	596.6	483.9	11,238.8	2,443.7

(a) Prior to January 1985, excludes Trading Banks.

**HOUSING FINANCE FOR OWNER OCCUPATION: NUMBER OF DWELLING UNITS AND VALUE OF COMMITMENTS TO INDIVIDUALS BY TYPE OF LENDER**

	Banks		Permanent building societies	Other lenders (a)	Total
	Savings	Trading			
<b>CONSTRUCTION OF DWELLINGS</b>					
	(Number)				
1982-83 . . . . .	20,382	5,045	6,953	5,871	38,251
1983-84 . . . . .	28,642	6,351	14,558	8,342	57,893
1984-85 . . . . .	34,903	7,139	14,521	6,160	62,723
	(\$ million)				
1982-83 . . . . .	576.2	121.4	262.1	186.2	1,145.9
1983-84 . . . . .	883.4	183.3	586.1	288.6	1,941.4
1984-85 . . . . .	1,259.2	250.7	656.2	247.7	2,413.4
<b>PURCHASE OF NEWLY ERECTED DWELLINGS</b>					
	(Number)				
1982-83 . . . . .	7,928	2,555	3,924	4,663	19,070
1983-84 . . . . .	9,667	2,268	4,748	5,415	22,098
1984-85 . . . . .	10,224	1,912	6,078	3,650	21,864
	(\$ million)				
1982-83 . . . . .	242.2	61.4	157.1	168.3	629.0
1983-84 . . . . .	313.5	56.7	199.7	217.7	787.5
1984-85 . . . . .	383.7	75.3	293.7	161.3	914.1
<b>PURCHASE OF ESTABLISHED DWELLINGS</b>					
	(Number)				
1982-83 . . . . .	94,088	24,292	37,079	21,468	176,927
1983-84 . . . . .	117,558	24,422	66,448	26,066	234,494
1984-85 . . . . .	135,908	20,599	63,763	18,641	238,911
	(\$ million)				
1982-83 . . . . .	2,693.2	609.4	1,371.0	722.7	5,396.3
1983-84 . . . . .	3,684.7	723.0	2,585.6	918.5	7,911.8
1984-85 . . . . .	5,055.8	855.3	2,869.4	811.9	9,592.4
<b>TOTAL</b>					
	(Number)				
1982-83 . . . . .	122,398	31,892	47,956	32,002	234,248
1983-84 . . . . .	155,867	33,041	85,754	39,823	314,485
1984-85 . . . . .	181,035	29,650	84,262	28,451	323,398
	(\$ million)				
1982-83 . . . . .	3,511.6	792.2	1,790.2	1,077.2	7,171.2
1983-84 . . . . .	4,881.5	963.0	3,371.4	1,424.8	10,640.6
1984-85 . . . . .	6,700.4	1,181.4	3,819.1	1,220.8	12,921.7

(a) includes co-operative housing societies, finance companies, governments, credit unions and insurance companies.

## PERSONAL, COMMERCIAL AND LEASE FINANCE

Three new monthly collections were introduced in January 1985 to measure the lending activity of significant lenders in the fields of personal, commercial and lease finance. These collections replaced two previous collections the results of which were published in *Finance Companies, Australia* (5614.0) and *Instalment Credit for Retail Sales, Australia* (5631.0).

### Personal Finance

The statistics in the following tables measure finance commitments made by significant lenders to individuals for their own personal (non-business) use. A lender is considered to be significant if it is a bank, a life insurance company or a corporation registered under the *Financial Corporations Act 1974* and, during 1982-83, and if it committed funds exceeding \$4 million to individuals for their own use.

Comprehensive statistics on personal finance are available in the monthly publication *Personal Finance, Australia* (5642.0).



## PERSONAL FINANCE COMMITMENTS: TYPE OF LENDER

(\$ million)

1985	All banks	Finance companies	Credit Unions	Life insurance offices	Other lenders	Total
January . . . . .	802.6	251.6	123.4	2.9	9.7	1,190.2
February . . . . .	780.1	253.1	132.9	3.8	11.1	1,181.1
March . . . . .	879.3	273.0	141.0	5.5	11.9	1,310.6
April . . . . .	773.3	267.3	131.0	4.5	11.3	1,187.5
May . . . . .	1,168.8	331.0	156.4	5.5	12.3	1,674.0
June . . . . .	959.3	259.6	129.4	7.0	11.7	1,367.0

## PERSONAL FINANCE COMMITMENTS: TYPE OF FACILITY, ALL LENDERS

(\$ million)

1985	Fixed loan commitments	New and increased credit limits	Revolving credit commitments		Commitments for loans on live policies	
			Cancellations and reductions in credit limits	Credit limits		
				Total	Used	
January . . . . .	868.0	325.2	227.3	10,616.2	4,506.2	2.7
February . . . . .	919.4	264.1	156.9	10,722.6	4,526.0	3.5
March . . . . .	934.4	377.4	203.7	10,900.1	4,490.5	5.0
April . . . . .	892.9	296.9	249.1	10,948.5	4,601.5	4.1
May . . . . .	1,246.5	428.8	218.2	11,161.3	4,719.0	5.1
June . . . . .	1,008.7	351.6	186.5	11,326.3	4,703.1	6.7

## Commercial Finance

The statistics in the following tables measures commercial finance commitments made by significant lenders to trading and financial enterprises, non-profit organisations, governments, public authorities and individuals for use in business carried out by them.

A lender is considered to be significant if it is a bank, a corporation registered under the *Financial Corporations Act 1974*, or an insurance company and if it committed funds exceeding \$40.1 million for business purposes (excluding leasing of goods) during 1982-83.

Comprehensive statistics on commercial finance are available in the monthly publication *Commercial Finance, Australia* (5643.0).

## COMMERCIAL FINANCE COMMITMENTS: TYPE OF LENDER

(\$ million)

1985	Trading banks	Other banks	Finance companies	Money market corporations	Other lenders	Total
January . . . . .	2,147.8	206.8	377.9	382.9	39.9	3,155.3
February . . . . .	1,872.7	168.0	478.1	691.5	45.6	3,255.9
March . . . . .	2,161.3	169.9	698.0	823.7	46.8	3,899.7
April . . . . .	2,108.8	149.7	657.1	624.6	65.4	3,605.5
May . . . . .	3,445.0	190.6	685.9	672.3	86.1	5,079.9
June . . . . .	3,243.6	145.0	782.0	891.6	63.0	5,125.2

## COMMERCIAL FINANCE COMMITMENTS: FIXED LOAN FACILITIES

(\$ million)

1985	Construction	Purchase of real property	Purchase of plant and equipment	Refinancing	Other purposes	Total
January . . . . .	230.3	502.8	125.6	179.0	533.5	1,571.3
February . . . . .	244.3	442.9	139.9	161.6	637.1	1,625.7
March . . . . .	333.9	451.5	171.1	194.0	781.7	1,932.1
April . . . . .	258.1	465.9	153.4	198.4	726.6	1,802.3
May . . . . .	339.5	488.6	193.5	253.4	957.1	2,232.1
June . . . . .	263.7	480.1	278.8	181.4	1,464.6	2,668.6

**COMMERCIAL FINANCE COMMITMENTS (a) INDUSTRY OF BORROWER**  
(\$ million)

Industry of borrower	1985					
	January	February	March	April	May	June
Agriculture, forestry fishing & hunting . . .	308.7	311.8	405.8	411.6	486.7	425.8
Mining . . . . .	102.0	67.6	112.4	73.0	258.5	271.2
Manufacturing . . . . .	325.5	411.1	422.4	330.5	629.5	846.4
Construction . . . . .	295.1	397.2	419.9	345.6	534.6	406.5
Wholesale Trade . . . . .	150.9	160.3	231.2	292.0	213.3	253.9
Retail Trade . . . . .	241.2	250.7	346.1	328.4	516.4	444.0
Transport & storage . . . . .	82.2	77.4	82.9	125.7	165.6	121.4
Finance, investment and insurance . . . . .	720.2	502.3	702.5	641.4	858.6	947.2
Property and business services . . . . .	280.5	458.6	584.9	420.3	731.3	565.1
Other industries . . . . .	649.0	619.1	591.5	637.3	685.2	843.8
<b>Total industries</b> . . . . .	<b>3,155.3</b>	<b>3,255.9</b>	<b>3,899.7</b>	<b>3,605.5</b>	<b>5,079.9</b>	<b>5,125.2</b>

(a) Includes both fixed loan facilities and new and increased lending commitments under revolving credit facilities.

**Lease finance**

The statistics in the following tables measure lease finance commitments made by significant lenders to trading and financial enterprises, non-profit organisations, governments, public authorities and individuals.

A lender is considered to be significant if it is a trading bank or a corporation registered under the *Financial Corporations Act 1974* and categorised as a money market corporation or a finance company or a general financier and if it committed funds exceeding \$13 million during 1982-83.

Comprehensive statistics on lease finance are available in the monthly publication *Lease Finance, Australia* (5644.0).

**LEASE FINANCE COMMITMENTS: TYPE OF LESSOR**  
(\$ million)

1985	Trading banks	Money market corporations	Finance companies	General financiers	Total
January . . . . .	61.4	18.6	295.6	14.0	389.6
February . . . . .	63.2	10.7	322.1	17.5	413.5
March . . . . .	64.7	20.8	416.2	24.4	526.1
April . . . . .	75.4	11.4	398.8	21.0	506.6
May . . . . .	101.8	23.4	457.1	30.0	612.3
June . . . . .	306.9	91.9	577.5	36.6	1,012.8

**LEASE FINANCE COMMITMENTS: TYPE OF GOODS LEASED**  
(\$ million)

Type of goods	1985					
	January	February	March	April	May	June
Motor Vehicles & other transport equipment	231.5	236.0	300.5	274.9	313.7	408.5
Construction & earth moving equipment . . .	22.1	21.5	39.4	39.0	44.1	118.6
Agricultural machinery & equipment . . . .	26.6	35.9	36.6	36.0	48.2	104.4
Automatic data processing equipment and office machinery . . . . .	23.9	28.9	45.6	37.7	53.7	127.6
Shop & office furniture, fittings & equipment	22.3	19.6	24.2	27.7	34.6	47.4
Other goods . . . . .	63.2	71.7	79.8	91.3	117.8	206.4
<b>Total</b> . . . . .	<b>389.6</b>	<b>413.5</b>	<b>526.1</b>	<b>506.6</b>	<b>612.3</b>	<b>1,012.8</b>

## LEASE FINANCE COMMITMENTS: INDUSTRY OF LESSEE

(\$ million)

Industry of lessee	1985					
	January	February	March	April	May	June
Agriculture, forestry fishing & hunting . . .	48.7	50.3	60.0	60.8	72.2	99.2
Mining . . . . .	9.9	10.3	14.8	12.4	15.6	51.3
Manufacturing . . . . .	42.9	56.0	62.0	56.4	80.6	135.9
Construction . . . . .	29.9	36.9	53.7	45.9	53.2	103.8
Wholesale Trade . . . . .	23.7	25.1	29.3	37.0	42.7	56.7
Retail Trade . . . . .	51.9	51.1	59.5	60.5	68.5	101.2
Transport & storage . . . . .	53.2	42.9	62.3	65.5	79.7	198.8
Finance, investment and insurance . . . . .	10.1	12.2	15.1	10.2	14.8	23.9
Property and business services . . . . .	47.4	54.9	70.8	58.0	68.1	86.3
Community Services . . . . .	13.4	14.6	16.1	15.4	24.7	40.9
Other industries . . . . .	58.5	59.4	82.5	84.4	92.1	114.8
<b>Total industries</b> . . . . .	<b>389.6</b>	<b>413.5</b>	<b>526.1</b>	<b>506.6</b>	<b>612.3</b>	<b>1,012.8</b>

### NEW CAPITAL RAISINGS BY COMPANIES LISTED ON AUSTRALIAN STOCK EXCHANGES

Information relating to capital raised by companies listed on Australian Stock Exchanges is given in the following tables.

These statistics cover capital raised through share and debenture subscriptions and by way of deposits, unsecured notes and loans secured over the entire assets of the company. The following funds are excluded from the collection: (a) all capital raised from Australian banks (other than direct equity investment), i.e. overdrafts, mortgage loans, terms loans or debentures; (b) temporary advances or short-term deposits from any source; and (c) complete or partial issues by Australian companies on overseas markets taken up through overseas brokers.

Listed companies are companies incorporated in Australia whose shares, debentures or other securities are listed on one or more of the Australian Stock Exchanges. For such companies new capital includes: (a) all issues of ordinary shares if any ordinary shares are listed; (b) all issues of preference shares if any preference shares are listed; and (c) all issues of debentures, unsecured notes, secured and unsecured loans and deposits if any shares or other securities are listed.

More detailed statistics concerning New Capital Raisings may be found in the quarterly publication *New Capital Raisings by Companies listed on Australian Stock Exchanges* (5628.0).

The following notes relate to specific items in the tables:

#### New money

This is the net amount of cash transferred from the 'investing public' to the 'company sector'. For this purpose the *investing public* is defined to include all non-company subscribers, Australian life insurance companies, Commonwealth Government and private superannuation funds and banks. In practice, it is necessary to include in *new money* most subscriptions by companies holding less than 5 per cent of the ordinary shares of an issuing company as it is not practicable to separately identify all such subscriptions. However, where large subscriptions by companies holding less than 5 per cent of the ordinary shares in the issuing company are identified they are not included in *new money*. Subscriptions by Australian life insurance companies and Commonwealth Government and private superannuation funds are included in *new money* irrespective of their holdings of ordinary shares in the issuing company.

#### Amount not involving new money

This amount includes cash subscriptions received by issuing companies from associated companies. Also included are amounts which, although subscribed by the 'investing public' (i.e. subscribers other than 'associated companies'), are not retained by the issuing company or its associates, but are used to redeem shares, debentures or unsecured notes, etc., or are used to purchase from individuals existing shares, debentures, etc., in other companies, including existing shares, etc. in associated and subsidiary companies, and therefore do not represent a net transfer of cash from the 'investing public' to the companies. In the tables which follow, the *amount not involving new money* is obtained by deducting the amount of *new money* from the total capital raised.

## LISTED COMPANIES: NEW CAPITAL RAISED THROUGH ISSUES OF SHARES (a) AND THROUGH DEBENTURES, UNSECURED NOTES, LOANS AND DEPOSITS

(\$ million)

Share capital									
Total amount of issues commenced		Cash raised during period				Debentures, unsecured notes, etc.			
Total amount including premiums etc.	Type of consideration		Total (c)	Amount not involving new money	New money	Total amount raised (d)	Amount not involving new money		New money
	Other than cash (b)	Cash					(d)	(d)	
Year ended June—									
1980	2,211.9	824.6	1,387.3	1,336.7	255.1	1,081.6	9,378.0	7,924.6	1,453.4
1981	4,171.0	1,642.2	2,528.8	2,625.7	479.0	2,146.8	12,682.5	11,066.1	1,616.4
1982	2,269.6	890.1	1,379.4	1,593.7	290.2	1,303.4	15,453.2	13,639.8	1,813.5
1983	1,208.1	299.2	908.9	1,013.5	269.5	744.0	13,805.0	13,219.0	586.1
1984	2,890.4	736.6	2,153.8	1,758.0	418.4	1,339.6	13,674.2	13,196.9	477.2
1985	2,883.0	778.8	2,104.1	2,179.3	769.4	1,409.8	14,210.3	12,257.2	1,953.1

(a) Includes share subscriptions by overseas investors to issues in Australia. (b) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (c) Includes calls on issues commenced in earlier years. (d) includes conversions renewals, etc.

## LISTED COMPANIES: NEW MONEY RAISED IN SHARES AND DEBENTURES, UNSECURED NOTES, LOANS AND DEPOSITS—INDUSTRY GROUPS (a)

(\$ million)

	Manufacturing	Finance, Property and Business Services	Wholesale and Retail Trade	Mining	Other	All Industries
SHARES						
Year ended June—						
1980	419.9	119.8	55.2	396.1	90.7	1,081.6
1981	892.3	119.8	130.9	905.6	98.2	2,146.8
1982	383.3	74.1	129.9	566.1	150.1	1,303.4
1983	319.7	74.1	95.0	170.1	85.1	744.0
1984	284.1	251.7	53.7	645.5	104.6	1,339.6
1985	368.4	520.9	122.0	213.0	185.5	1,409.8

## DEBENTURES, UNSECURED NOTES, LOANS AND DEPOSITS

Year ended June—						
1980	409.9	887.7	86.3	15.6	53.9	1,453.4
1981	337.4	1,145.3	57.1	5.8	70.6	1,616.4
1982	211.6	1,443.0	117.0	(b) - 44.4	86.3	1,813.5
1983	18.8	491.4	(b) - 12.5	5.7	82.6	586.1
1984	(b) - 73.9	353.0	22.4	79.3	96.5	477.2
1985	(b) - 184.6	1,838.8	236.0	78.4	(b) 15.5	1,953.1

## TOTAL NEW MONEY RAISED

Year ended June—						
1980	829.8	1,007.5	141.5	411.7	144.6	2,535.0
1981	1,229.7	1,265.1	188.0	911.4	168.8	3,763.2
1982	594.9	1,517.1	246.8	521.7	236.4	3,116.9
1983	338.5	565.5	82.5	175.8	167.7	1,330.1
1984	210.2	604.7	76.1	724.8	201.2	1,817.0
1985	183.8	2,359.7	358.0	291.4	170.0	3,362.9

(a) Until 1981 companies were classified in accordance with the Population Census Classification of Industries (Revised 1966) and from 1982 in accordance with the Australian Standard Industrial Classification (ASIC). (b) Excess repayments over receipts.

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Co-operative housing societies: assets, liabilities, income and expenditure, Australia (annual) (5633.0)  
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Finance companies (Financial Corporations Act), Australia (monthly) (5639.0)  
Other financial corporations, Australia (monthly) (5640.0)  
Personal finance, Australia (monthly) (5642.0)  
Commercial finance, Australia (monthly) (5643.0)  
Lease finance, Australia (monthly) (5644.0)

## CHAPTER 22

### PUBLIC FINANCE

This chapter deals with the financial activities of the organisations which make up the three levels of government in the Australian political system—Commonwealth, State and Local—and which collectively constitute the public sector. An account is given of the activities of each level of government, with particular emphasis being given to the Commonwealth Government. Tables are then presented which bring together the transactions of all public non-financial enterprises to highlight the role in the Australian economy of the public sector as a whole. Then follows a section on government borrowing activities at all levels.

#### Concepts and Definitions used in Public Finance Statistics

The tables below (except those explicitly sourced to Budget Papers) are provided from the system of government finance statistics (GFS). To assist users in understanding the statistics presented in these tables a separate publication *Classifications Manual for Government Finance Statistics, Australia* (1217.0) has been produced. It outlines the major concepts used and provides definitions of the enterprise unit used for GFS collections and the categories in each of the main unit and transactions classifications employed. The GFS classifications used in the tables that follow are:

- (a) the *Economic Transactions Framework* (ETF) which categorises outlays, revenue, grants received and financing transactions according to their economic character to facilitate study of the macroeconomic effect of government activity on the economy and to provide the basic building blocks for grouping transactions to be incorporated into the Australian National Accounts;
- (b) the *Taxes, Fees and Fines Classification* (TFFC) which dissect this major form of government revenue according to the type of tax, fee or fine collected; and
- (c) the *Government Purpose Classification* (GPC) which is used to group outlays with similar functions to facilitate study of the broad purposes of public sector spending and assessment of the effectiveness of outlays in meeting government policy objectives.

### COMMONWEALTH GOVERNMENT FINANCE

#### Financial provisions of the Constitution

The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth of Australia are contained in Sections 81 to 105A of the Commonwealth Constitution.

Two other sections which have a most important bearing on questions of Commonwealth finance are Sections 69 and 51. Section 69 provides for the transfer from the States to the Commonwealth of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments.

Sections 87 and 96 of the Constitution deal with the financial relations between the Commonwealth and the States. The full text of the Financial Agreement of 1927 was given in Year Book No. 31, page 21; accounts of this Agreement as affected by subsequent Agreements were included in later issues of the Year Book up to No. 37 (*see* pages 685–90); details of the main provisions appeared in further issues of the Year Book up to No. 50 (*see* pages 952–3). For details of current provisions for financial assistance to the States reference should be made to the Commonwealth Budget Paper No. 7 *Payments to or for the States, the Northern Territory and Local Government Authorities, 1985–86*.

The *Audit Act 1901* lays down the procedure which must be followed in accounting for the receipt and disbursement of public funds. The general administration of Commonwealth Government finances is the responsibility of the Commonwealth Minister for Finance.

### Commonwealth Government Budget

The Commonwealth Government Budget records the transactions of those enterprises of the Commonwealth Government whose receipts and payments are summarised in the statements of Public Account balances. In 1984-85 the change in cash balances was represented by the following—

	\$'000
Net Cash receipts of the Consolidated Revenue Fund . . . . .	58,218,178
<i>plus</i> cash receipts of Loan Fund . . . . .	27,953,992
<i>plus</i> cash receipts of Trust Fund . . . . .	23,135,808
<i>Total.</i> . . . . .	109,307,978
<i>less</i> cash payments from Consolidated Revenue Fund . . . . .	58,218,178
<i>less</i> cash payments from Loan Fund . . . . .	27,954,068
<i>Less</i> cash payments from Trust Fund (including decrease in invest- ments of the Trust Fund) . . . . .	22,813,541
<i>Total.</i> . . . . .	108,985,787
<i>equals</i> increase in cash balances . . . . .	322,190

Revenues from taxation and other sources are paid into the Consolidated Revenue Fund, from which the main expenditures are for defence, social services, payments to the States and general administration. The Trust Fund covers special transactions outside the ordinary operations of departmental expenditures, such as pension funds and moneys held for expenditure by the Commonwealth Government at some future time. The Loan Fund receives its funds from the sale of the Commonwealth Government securities, and the expenditures from the Fund are made in accordance with the purpose of issue of each loan. The main disbursements from the Loan Fund are to the States by way of distribution of the proceeds of loans raised by the Commonwealth Government on their behalf and by capital assistance grants, the remaining disbursements being mainly for Commonwealth Government purposes.

The estimated outlay, revenue and deficit of the Budget for 1985-86 are set out in the table which follows, together with figures for the years 1980-81 to 1984-85. The national accounting presentation of the Budget is shown in order to be consistent with other transactions figures given in this chapter.

It should be noted that some transactions undertaken by enterprises covered by the Budget are not reflected in the change in cash balances, usually because they are not cash transactions or because a receipt and a payment are offset against each other so that only a net amount is included in published totals. The national accounting presentation of the Budget includes these additional transactions, further details of which may be found in Budget Paper No. 1, *Budget Statements 1985-86*.

#### OUTLAYS, REVENUE AND DEFICIT OF THE COMMONWEALTH BUDGET (\$ million)

(Source: Budget Paper No. 1 *Budget Statements 1985-86*)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86 Budget Estimates
<b>Outlay—</b>						
Net expenditure on goods and services—						
Current . . . . .	6,504	7,616	8,659	10,058	11,348	12,680
Capital (a) . . . . .	70	219	340	279	370	335
<i>Total.</i> . . . . .	6,574	7,835	8,999	10,337	11,718	13,015
<b>Transfer payments—</b>						
Personal benefit payments . . . . .	10,978	12,932	15,523	18,375	20,651	22,180
Unfunded employee retirement benefits . . . . .	..	..	..	..	..	..
Grants to States and Northern Territory . . . . .	12,003	13,181	15,395	17,789	19,637	20,951
Grants to non-profit institutions . . . . .	90	134	504	593	724	818
Interest paid . . . . .	2,561	2,881	3,378	4,334	5,664	6,733
Transfers overseas . . . . .	583	668	732	784	872	870
Subsidies . . . . .	1,160	1,118	1,246	1,229	1,346	1,229
Grants for private capital purposes . . . . .	98	194	232	313	373	361
Transfers to non-budget sector (b) . . . . .	1,032	1,273	1,454	1,579	1,855	2,159
<i>Total.</i> . . . . .	28,506	32,381	38,463	44,997	51,122	55,302

OUTLAYS, REVENUE AND DEFICIT OF THE COMMONWEALTH BUDGET—*continued*

(\$ million)

(Source: Budget Paper No. 1 *Budget Statements 1985-86*)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86 Budget Estimates
<b>Net advances—</b>						
States and Northern Territory . . . . .	938	866	1,056	1,002	799	785
Non-budget Commonwealth Authorities . . . . .	-28	19	226	-18	4	-94
Other sectors . . . . .	31	105	67	142	95	58
<b>Total . . . . .</b>	<b>940</b>	<b>990</b>	<b>1,350</b>	<b>1,127</b>	<b>898</b>	<b>749</b>
<b>Total outlay . . . . .</b>	<b>36,020</b>	<b>41,206</b>	<b>48,812</b>	<b>56,460</b>	<b>63,739</b>	<b>69,067</b>
<b>Revenue—</b>						
<b>Taxation—</b>						
Income tax on companies . . . . .	4,856	5,258	5,107	4,940	6,034	6,980
Income tax on persons . . . . .	17,543	21,224	22,967	24,710	29,300	32,690
Sales tax, Customs and Excise duties . . . . .	9,820	11,004	12,398	14,294	16,507	18,256
Tax on Certain Bank Transactions . . . . .	..	..	30	183	189	200
A.C.T. taxes and charges . . . . .	61	76	94	105	126	145
Less remissions . . . . .	1	2	1	..	..	..
Other taxes, fees, fines, etc . . . . .	127	151	169	208	266	356
<b>Total . . . . .</b>	<b>32,407</b>	<b>37,711</b>	<b>40,765</b>	<b>44,439</b>	<b>52,422</b>	<b>58,627</b>
<b>Non-Taxation Revenue—</b>						
Interest, rent, dividends, royalties, etc. . . . .	2,506	2,919	3,574	4,060	4,567	5,519
Miscellaneous income from Commonwealth enterprises . . . . .	2	..	6	..	4	2
<b>Total . . . . .</b>	<b>2,508</b>	<b>2,919</b>	<b>3,580</b>	<b>4,060</b>	<b>4,571</b>	<b>5,521</b>
<b>Total revenues . . . . .</b>	<b>34,914</b>	<b>40,631</b>	<b>44,345</b>	<b>48,499</b>	<b>56,993</b>	<b>64,149</b>
<b>Deficit . . . . .</b>	<b>1,105</b>	<b>576</b>	<b>4,467</b>	<b>7,960</b>	<b>6,746</b>	<b>4,919</b>

(a) Expenditure on new fixed assets *plus* increase in stocks *less* sales of previously rented houses. (b) The Commonwealth Non-Budget sector consists of enterprises which operate outside the Public Account. This includes both general government enterprises which largely depend on budget funding (e.g. ABC) and public trading enterprises which are largely self-financing (e.g. Telecom).

**Financing of the Commonwealth Government deficit**

The deficit shown in the last line of the preceding table represents the net excess of Budget outlay over revenue. In other words, the estimated deficit shown for 1985-86 represents the Commonwealth Government budget sector's 'financing requirements'. Most such transactions involve the issue, repurchase, redemption or acquisition of Commonwealth Government securities, but some involve or are represented by changes in other assets or liabilities of the Commonwealth Government.

Specifically the deficit is financed as follows:

Net sales of Commonwealth Government securities (new issues *less* redemptions *less* net purchases from Commonwealth Government balances in the Trust Fund);  
*less* net purchases of other investments from Commonwealth Government balances in the Trust Fund  
*plus* minor items of indebtedness (such as borrowing by Australian Capital Territory housing trust account)  
*less* net additions to cash balances, and funds provided for the International Monetary Fund and the Australian Wheat Board.

A table summarising the financial transactions of the Commonwealth Government budget sector for recent years is given on page 387, Table 1 in 1985-86 *Budget paper* No. 1.

**COMMONWEALTH NON-BUDGET ENTERPRISES**

In addition to the group of Commonwealth Government enterprises whose transactions are covered by the Budget (i.e. itemised in the Consolidated Revenue Fund, the Loan Fund, or recorded in a Trust Fund), there are a number of organisations owned or controlled by the Commonwealth Government whose transactions do not, for the most part, pass through the Public Account. This category includes public trading enterprises such as the Australian Postal Commission, Australian Telecommunications Commission, Overseas Telecommunications Commission, Qantas, Trans-Australia Airlines, the Australian Shipping Commission, the Snowy Mountains Hydro-electric Authority, and public financial enterprises such as the



Reserve Bank and the Commonwealth Banking Corporation. Public trading and financial enterprises, it should be noted, are bodies which aim at covering the bulk of their expenses by revenue either from sales of goods and services (trading enterprises), or by charges for services and net interest receipts (financial enterprises). As well as these enterprises, there are other government enterprises which record most of their transactions outside the Public Account but have only minor independent sources of revenue and are financed almost entirely from funds voted to them each year from the Consolidated Revenue Fund. In order that the national accounting presentation may indicate as completely as possible the direct effect of the budget on demand, appropriations to this last group of enterprises are treated as final expenditure in the Budget. Enterprises in this category include the Australian Broadcasting Commission, Australian National University, National Capital Development Commission, and the Australian Atomic Energy Commission.

The transactions of Commonwealth Government bodies not covered by the Budget may be brought together and consolidated with the transactions recorded in the Budget to yield figures of the transactions of all Commonwealth public sector enterprises which are owned and/or controlled by the Commonwealth Government. The remaining tables in this section have been prepared on that basis.

Public financial enterprises have been omitted from the consolidated accounts presented here largely on the ground that combining the income and outlay and capital financing transactions of the Reserve Bank, the publicly owned trading and savings banks, government insurance offices and other public financial institutions with the equivalent transactions of public trading enterprises and general government enterprises seems to provide a less meaningful account of public sector activity. For example, omission of the borrowing and lending activities of the government banks and the Reserve Bank allows attention to be centred on the borrowing and lending activities of general government and public trading enterprises, which are quite different in nature and economic effect from the financing activities of the banking system.

#### **Coverage—Northern Territory government**

On 1 July 1978 the Northern Territory became self-governing with expenditure responsibilities and revenue raising powers broadly approximating those of a State. In public finance statistics the Northern Territory government is grouped with State and local governments from 1978–79 onwards. This results in a discontinuity in time series for the financial transactions of Commonwealth Government enterprises because:

- In the period up to and including 1977–78 Commonwealth spending on State-type services in the Northern Territory is included under the various Commonwealth outlay categories such as final consumption expenditure and gross capital formation. Similarly, State-type taxation and income from N.T. public trading enterprises is included in the respective Commonwealth revenue categories.
- From 1978–79 onwards Commonwealth spending in respect of the Northern Territory consists to a large extent of grants and advances to Northern Territory general government enterprises while State-type taxation and income from N.T. public trading enterprises are no longer part of Commonwealth revenue.
- Not all State-type functions were fully transferred to the Northern Territory Government from 1 July 1978. Responsibility for health services was transferred on 1 January 1979 and responsibility for education services was transferred from 1 July 1979. The Commonwealth retains responsibility for certain State-type matters such as uranium mining and Aboriginal affairs (other than provision of services to Aboriginal communities).

#### **Summary of outlay revenue and deficit**

The outlay and revenue, and outlay classified by purpose, of all non-financial enterprises of the Commonwealth Government for the six-year period ending 1983–84 are given in the following table.

**OUTLAYS, REVENUE AND DEFICIT OF COMMONWEALTH GOVERNMENT**  
(\$ million)

	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84p
Current outlays . . . . .	26,249	29,153	33,476	38,342	45,042	52,399
General government final consumption expenditure . . . . .	5,595	6,258	7,364	8,664	9,993	11,526
Required current transfer payments (a) . . . . .	2,086	2,366	2,756	3,142	3,724	4,667
Unrequited current transfer payments . . . . .	18,568	20,529	23,356	26,536	31,325	36,207
Subsidies paid to enterprises . . . . .	673	835	1,031	1,145	1,243	1,469
Personal benefit payments . . . . .	9,110	9,905	11,237	13,093	15,952	18,714
Current grants . . . . .	8,785	9,789	11,088	12,298	14,130	16,024
to non-profit institutions . . . . .	162	177	206	227	267	318
to foreign governments and organisations . . . . .	475	520	575	668	732	767
to the States and Northern Territory . . . . .	8,138	9,081	10,292	11,384	13,106	14,907
to Local governments (direct) . . . . .	10	11	15	19	24	32
Other current transfer payments . . . . .	-	-	-	-	-	-
Capital outlays . . . . .	3,813	3,965	4,192	4,939	5,991	6,760
Gross fixed capital expenditure . . . . .	1,266	1,392	1,471	1,809	2,154	2,269
Expenditure on new fixed assets . . . . .	1,355	1,431	1,758	2,100	2,264	2,295
Expenditure on secondhand fixed assets (net) . . . . .	-89	-40	-287	-290	-110	-26
Increase in stocks . . . . .	-209	-66	76	180	241	157
Expenditure on Land and intangible assets (net) . . . . .	-13	-1	-143	-14	-36	-61
Capital transfer payments . . . . .	1,624	1,737	1,813	2,005	2,504	3,182
Capital grants . . . . .	1,624	1,737	1,813	2,005	2,504	3,182
to the States and Northern Territory . . . . .	1,484	1,566	1,669	1,771	2,210	2,795
to Local governments (direct) . . . . .	8	5	7	7	20	21
to other sectors . . . . .	132	166	138	227	274	367
Other capital transfer payments . . . . .	..	..	..	..	..	..
Advances paid (net) . . . . .	1,146	902	975	958	1,128	1,213
to the States, Northern Territory and Local governments . . . . .	1,127	896	938	866	1,058	999
to other sectors . . . . .	18	6	37	93	70	214
Revenue . . . . .	25,943	30,118	35,593	41,381	44,974	49,678
Taxes, fees and fines . . . . .	23,422	27,513	32,676	37,932	41,003	44,745
Income taxes levied on individuals . . . . .	12,791	15,033	17,532	21,205	22,943	24,691
Income taxes levied on enterprises and non-residents . . . . .	3,139	3,539	4,841	5,258	5,103	4,929
Other taxes, fees and fines . . . . .	7,492	8,942	10,303	11,470	12,958	15,125
Net operating surpluses of public trading enterprises . . . . .	730	716	776	932	914	1,564
Property income and other revenue . . . . .	1,791	1,889	2,141	2,517	3,057	3,369
Financing transactions . . . . .	4,119	3,000	2,075	1,900	6,058	9,481
Increase in provisions . . . . .	545	612	674	737	833	862
Deficit . . . . .	3,574	2,388	1,402	1,163	5,224	8,619

(a) Interest, land rent, royalties and dividends paid.

### Grants and advances to the States and the Northern Territory

Commonwealth Government financial assistance to the States and the Northern Territory takes two main forms: (i) grants for general and specific purposes, and (ii) assistance for developmental and other specific purposes in the form of repayable advances. Some information about these forms of financial assistance is given below, but for more complete information reference should be made to the Commonwealth Government Budget Paper No. 7 *Payments to or for the States, the Northern Territory and Local Government Authorities*. Further information also appears in chapters of this Year Book dealing with the specific function which the payments are designed to serve.

### Grants to the States and the Northern Territory

The following tables show details of grants to the States and the Northern Territory classified by purpose.

**GRANTS TO STATES AND NORTHERN TERRITORY BY GOVERNMENT PURPOSE  
CLASSIFICATION AND STATE 1983-84**

(\$ million)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Total</i>
<i>Current grants</i>	4,593.6	3,536.9	2,472.6	1,526.9	1,570.0	581.8	624.8	14,906.6
General public services, defence, public order and safety	1.1	0.8	0.7	0.1	0.3	0.1	0.6	3.6
Education	995.3	878.4	435.2	263.8	271.8	78.5	16.4	2,939.5
Primary and secondary education	395.2	340.0	173.5	87.2	94.1	27.4	9.2	1,126.6
Tertiary education	591.8	527.8	253.8	170.5	170.1	49.6	6.6	1,770.2
University education	368.1	257.0	138.7	91.4	79.2	35.0	—	969.3
Other higher education	174.0	234.3	100.0	66.6	78.1	10.4	—	663.4
Technical and further education	49.7	36.6	15.1	12.5	12.9	4.2	6.6	137.5
Preschool education and education not definable by level	8.3	10.5	7.8	6.1	7.6	1.5	0.6	42.6
Preschool education	7.1	9.0	6.6	3.7	4.9	1.4	0.3	33.1
Other education not definable by level	1.1	1.5	1.2	2.4	2.8	0.1	0.3	9.5
Other education	—	0.1	—	—	—	—	—	0.1
Health	109.7	84.8	42.1	118.7	36.1	38.1	2.6	432.1
Hospitals and other institutional services and benefits	104.1	80.0	35.8	114.8	27.3	37.7	2.4	402.1
Clinic and other non-institutional services and benefits	3.0	4.2	1.4	2.2	1.2	0.3	0.1	12.4
Public Health	2.6	0.5	4.9	1.8	7.6	0.2	0.1	17.6
Social security and welfare	27.7	20.7	6.7	9.4	6.8	3.5	0.8	75.5
Social security	—	—	—	—	—	1.5	—	1.6
Welfare services	20.7	15.5	5.1	7.6	5.1	1.4	0.6	55.9
Family and child welfare	6.7	5.9	2.7	4.2	2.2	0.8	0.5	22.9
Aged and handicapped welfare	12.8	9.2	2.0	1.5	1.4	0.6	0.1	27.6
Welfare services NEC	1.2	0.4	0.4	1.9	1.5	—	—	5.4
Social security and welfare NEC	7.0	5.3	1.6	1.8	1.8	0.6	0.2	18.1
Housing and community amenities	1.6	1.3	0.6	1.1	1.3	0.3	5.3	11.6
Housing and community development	1.8	1.3	0.4	1.1	1.3	0.3	5.3	11.6
Housing	1.8	1.3	0.4	0.9	0.6	0.3	—	5.3
Community Development	—	—	—	0.1	0.7	—	5.3	6.1
Community amenities	—	—	0.2	—	—	—	—	0.2
Recreation and culture	—	—	0.2	—	—	—	—	0.2
Fuel and energy	—	—	—	—	—	—	67.5	67.5
Agriculture, forestry, fishing and hunting	6.4	4.8	10.2	2.7	2.2	0.4	10.0	36.7
Agriculture	6.4	4.8	10.2	2.7	2.2	0.4	10.0	36.7
Agricultural land management	6.1	4.5	10.0	2.6	2.0	0.1	10.0	35.3
Agricultural water resources management	—	—	—	—	—	—	—	—
Other agriculture	-0.3	0.3	0.2	0.1	0.3	0.3	—	1.5
Transport and communications	0.1	—	0.4	—	—	—	0.1	0.8
Road transport	—	—	—	—	—	—	—	0.2
Other transport and communications	—	—	0.4	—	—	—	0.1	0.6
Other economic affairs	135.2	90.4	60.8	30.5	32.8	10.4	3.7	363.7
Other purposes	3,316.4	2,455.7	1,916.0	1,100.4	1,218.6	450.3	517.8	10,975.3
General purpose inter-government transactions	3,301.5	2,444.8	1,901.5	1,096.3	1,216.6	449.8	517.8	10,928.3
Natural disaster relief	14.9	10.8	14.5	4.1	2.1	0.5	—	47.0
Capital grants	865.6	576.3	502.9	264.3	286.3	183.8	115.3	2,794.6
Education	150.1	113.4	68.8	40.5	35.8	10.9	7.2	426.7
Primary and secondary education	63.7	53.2	32.2	16.7	18.4	6.0	3.4	193.6
Tertiary education	86.2	60.2	36.2	23.7	17.4	4.9	3.6	232.1
University education	26.1	14.6	12.8	5.8	5.8	1.7	—	66.7
Other higher education	18.0	15.7	4.6	3.9	3.5	0.4	—	46.2
Technical and further education	42.1	29.9	18.8	14.0	8.1	2.8	3.6	119.3
Preschool education and education not definable by level	0.2	—	0.5	0.1	0.1	—	0.1	1.0
Other education not definable by level	0.2	—	0.5	0.1	0.1	—	0.1	1.0
Health	0.2	0.1	0.4	0.3	0.3	0.4	—	1.7
Hospitals and other institutional services and benefits	—	—	—	—	—	0.2	—	0.2
Clinic and other non-institutional services and benefits	0.1	0.1	0.2	—	0.1	0.1	—	0.7
Public health	0.1	—	0.2	0.2	0.2	0.2	—	0.8
Social security and welfare	14.7	8.7	6.4	3.2	3.8	1.1	0.5	38.5
Social security	0.8	0.9	0.8	0.4	0.7	0.2	—	3.9
Welfare services	13.9	7.8	5.6	2.8	3.1	0.9	0.5	34.6
Family and child welfare	2.0	—	—	—	0.4	—	—	2.5
Aged and handicapped welfare	11.9	7.8	5.6	2.7	2.7	0.9	0.5	32.0
Welfare services NEC	—	—	—	0.1	—	—	—	0.1
Housing and community amenities	120.6	89.8	59.7	55.5	51.0	17.1	22.8	416.6
Housing and community development	117.1	86.8	45.7	46.7	38.3	17.0	21.6	373.1
Housing	116.5	86.8	44.4	45.9	35.0	17.0	21.4	367.0
Community development	0.6	—	1.2	0.8	3.2	—	0.2	6.1
Community amenities	3.5	3.1	14.0	8.8	12.8	0.1	1.2	43.5
Recreation and culture	5.3	3.1	0.4	2.2	0.4	2.9	0.9	15.2

**GRANTS TO STATES AND NORTHERN TERRITORY BY GOVERNMENT PURPOSE  
CLASSIFICATION AND STATE 1983-84—continued**

(\$ million)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Total
Fuel and energy . . . . .	—	—	—	—	—	—	4.5	4.5
Agriculture, forestry, fishing and hunting . . . . .	4.2	4.1	9.5	2.6	5.0	0.2	1.5	27.2
Agriculture . . . . .	4.2	4.1	9.5	2.6	5.0	0.2	1.5	27.2
Agricultural water resources management . . . . .	3.3	2.6	8.4	1.6	3.5	0.2	1.4	21.0
Other agriculture . . . . .	0.9	1.5	1.1	1.0	1.4	—	0.2	6.2
Transport and communications . . . . .	404.7	229.1	270.1	93.8	142.9	53.9	32.8	1 227.3
Road transport . . . . .	404.7	229.1	254.5	93.8	142.9	51.8	32.8	1 209.6
Water transport . . . . .	—	—	—	—	—	1.0	—	1.0
Other transport and communications . . . . .	—	—	15.5	—	—	1.2	—	16.8
Other economic affairs . . . . .	—	—	—	—	—	—	—	—
Other purposes . . . . .	165.7	127.9	87.6	66.4	46.9	97.2	45.2	637.0
General purpose inter-government transactions . . . . .	158.3	123.0	64.9	63.8	45.3	97.2	43.0	595.6
Natural disaster relief . . . . .	7.4	4.9	22.7	2.5	1.6	—	2.2	41.4
<b>Total current and capital grants . . . . .</b>	<b>5 459.2</b>	<b>4 113.2</b>	<b>2 975.5</b>	<b>1 791.2</b>	<b>1 856.3</b>	<b>765.6</b>	<b>740.1</b>	<b>17 701.2</b>

**Advances to the States and the Northern Territory**

The Commonwealth is also providing financial assistance for State projects by way of repayable advances. Borrowings of the Loan Council which are advanced to the States for their work programs and advances for State housing projects represent the largest proportion of the total funds advanced. Full descriptions of the various programs for which funds have been advanced in recent years are given in *Payments to or for the States, the Northern Territory and Local Government Authorities*.

The following table shows figures of net advances to the States and Northern Territory by purpose.

**NET ADVANCES TO STATES AND N.T. BY GOVERNMENT PURPOSE CLASSIFICATION  
AND STATE 1983-84**

(\$ Million)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Total
<i>Net advances</i> . . . . .	302.2	231.4	126.1	108.9	83.4	59.2	87.9	999.1
Defence . . . . .	2.2	-0.3	2.3	—	0.1	—	—	4.2
Social Security and Welfare . . . . .	—	—	—	—	—	—	—	—
Housing and community amenities . . . . .	79.9	77.2	20.8	134.2	19.8	23.6	6.2	361.6
Housing and community development . . . . .	80.3	77.6	22.0	134.9	20.7	23.6	6.3	365.5
Housing . . . . .	52.8	68.0	22.0	140.4	16.0	23.6	6.3	329.3
Community development . . . . .	27.5	9.6	—	-5.5	4.7	—	—	36.2
Water supply . . . . .	—	—	-1.1	-0.7	-0.8	—	—	-2.6
Sanitation and protection of the environment . . . . .	-0.4	-0.4	-0.1	-0.1	-0.1	—	-0.1	-1.3
Fuel and energy . . . . .	—	—	-2.7	-3.0	—	—	-1.6	-7.3
Agriculture, forestry, fishing and hunting . . . . .	-0.3	1.2	-23.6	2.2	5.6	-0.4	1.0	-14.3
Agriculture . . . . .	—	1.4	-23.3	2.3	5.7	-0.2	1.0	-13.2
Agricultural land management . . . . .	—	—	-0.7	—	—	—	—	-0.7
Agricultural water resources management . . . . .	-2.4	-0.3	—	—	-0.2	—	—	-2.9
Agriculture support schemes . . . . .	2.4	1.7	-22.6	2.3	5.9	-0.2	1.0	-9.6
Forestry, fishing and hunting . . . . .	-0.4	-0.1	-0.2	-0.1	-0.1	-0.1	—	-1.1
Mining, manufacturing and construction . . . . .	4.1	—	—	—	—	-0.2	—	3.9
Manufacturing . . . . .	4.1	—	—	—	—	-0.2	—	3.9
Transport and communications . . . . .	-0.3	1.3	-1.1	—	-3.1	-0.1	—	-3.3
Water transport . . . . .	—	—	-0.1	—	—	-0.1	—	-0.2
Rail transport . . . . .	-0.3	1.3	-1.0	—	-3.1	—	—	-3.1
Other purposes . . . . .	216.7	151.9	130.4	-24.4	61.1	36.3	82.3	654.3
General purpose inter-government transactions . . . . .	218.1	144.4	88.9	-29.2	61.1	36.3	82.3	601.8
Natural disaster relief . . . . .	-1.4	7.5	41.5	4.9	0.1	—	—	52.5

Minus sign (-) denotes excess of repayments.

### Main sources of finance

The main sources of Commonwealth government finance are taxation, income of public trading and financial enterprises and other factor income transfers, and borrowing and other financing transactions. Taxation constitutes by far the major source of revenue. In recent years, however, borrowing has become an increasingly significant source of funds.

In what follows, an account is given of the system of Commonwealth Government taxation, and some details are given of the current operations of Commonwealth public enterprises. Borrowings and other financing activities of Commonwealth enterprises are dealt with for convenience in a later section relating to the debt of all public sector enterprises.

#### Commonwealth Government taxation—summary

The following tables show Commonwealth Government taxation revenue classified by type of tax for the six years ending 1983-84, and the proportion of each type to total collections.

COMMONWEALTH GOVERNMENT—TAXES, FEES AND FINES BY TYPE  
(\$ million)

Type of tax	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
Taxes, fees and fines . . . . .	23,421.9	27,513.5	32,676.3	37,932.3	41,003.5	44,745.1
Taxes on income . . . . .	15,930.0	18,571.2	22,373.1	26,462.7	28,045.3	29,620.1
Income taxes levied on individuals . . . . .	12,791.2	15,032.7	17,532.4	21,205.0	22,942.6	24,691.5
Personal income tax . . . . .	12,791.2	15,032.5	17,532.1	21,204.5	22,941.6	24,690.5
Mining withholding tax . . . . .	—	0.2	0.3	0.5	1.0	0.9
Income taxes levied on enterprises . . . . .	3,024.7	3,397.6	4,680.0	5,053.1	4,844.8	4,624.4
Company income tax (a) . . . . .	3,018.7	3,390.0	4,668.8	5,033.3	4,819.6	4,603.2
Income tax paid by superannuation funds . . . . .	6.0	7.6	11.1	19.8	25.2	21.2
Income taxes levied on non-residents . . . . .	114.1	140.9	160.7	204.6	258.0	304.2
Dividend withholding tax . . . . .	88.1	99.9	114.1	125.6	133.8	129.6
Interest withholding tax . . . . .	26.0	41.0	46.6	79.0	124.1	174.7
Employers' payroll taxes . . . . .	35.2	35.8	36.5	37.6	38.8	43.1
General taxes (payroll tax) . . . . .	16.2	15.7	17.0	19.3	21.4	23.8
Selective taxes (stevedoring industry charges) . . . . .	19.0	20.1	19.5	18.2	17.5	19.3
Taxes on property . . . . .	104.1	72.4	44.7	36.1	70.7	231.5
Taxes on immovable property . . . . .	15.0	16.5	19.2	20.9	24.5	24.5
Estate, inheritance and gift duties . . . . .	83.5	48.9	17.0	4.4	1.6	3.5
Taxes on financial and capital transactions . . . . .	5.6	6.9	8.4	10.8	44.6	203.6
Stamp duties . . . . .	5.6	6.9	8.4	10.8	15.0	20.9
Financial institutions' transaction taxes . . . . .	—	—	—	—	29.6	182.7
Taxes on provision of goods and services . . . . .	7,287.6	8,734.1	10,114.4	11,240.4	12,669.5	14,649.3
General taxes (sales tax) . . . . .	1,769.8	1,864.8	2,102.3	2,854.2	3,490.1	4,164.8
Excises . . . . .	3,999.3	5,237.8	6,094.3	6,226.4	7,067.5	8,080.3
Excises on crude oil and LPG . . . . .	1,227.0	2,270.2	3,107.9	3,163.3	3,486.0	3,664.5
425 Other Excise Act duties . . . . .	2,617.7	2,695.1	2,726.1	2,830.5	3,320.1	4,081.7
Agricultural production taxes . . . . .	154.6	272.5	260.2	232.6	261.4	334.2
Taxes on international trade . . . . .	1,517.7	1,630.2	1,916.4	2,158.4	2,104.6	2,398.3
Customs duties on imports . . . . .	1,363.0	1,538.1	1,799.5	2,059.7	2,035.6	2,329.0
Customs duties on exports . . . . .	93.5	90.7	84.9	96.9	66.6	66.6
Agricultural produce export taxes . . . . .	61.1	1.4	32.0	1.8	2.4	2.6
Taxes on gambling . . . . .	0.8	1.2	1.5	1.4	7.4	6.0
Taxes on insurance . . . . .	—	—	—	—	—	—
Taxes on use of goods and performance of activities . . . . .	38.0	47.1	51.5	82.5	100.6	113.9
Motor vehicle taxes . . . . .	7.9	7.8	7.8	10.6	13.6	16.7
Franchise taxes . . . . .	3.1	2.2	3.0	3.5	3.5	4.3
Other taxes on use of goods etc. . . . .	27.1	37.1	40.7	68.4	83.4	92.9
Broadcast and TV station licences . . . . .	14.6	18.1	21.5	30.9	40.4	48.4
Departure tax . . . . .	12.0	18.4	18.7	36.1	41.7	43.2
Other taxes on use of goods etc. . . . .	—	—	—	—	—	—
n.e.i. . . . .	0.6	0.6	0.5	1.4	1.3	1.3
Fees and fines . . . . .	27.0	52.9	56.3	73.1	78.5	87.2
Fees from regulatory services . . . . .	22.7	48.7	52.1	65.3	70.6	77.6
Fines . . . . .	4.2	4.2	4.2	7.8	7.9	9.6
(a) Excludes income taxes paid by public trading enterprises . . . . .	17.8	16.5	25.9	19.4	29.1	24.9

### Taxes on income

A description of the development of income taxes in Australia appeared in Year Book No. 35, page 926. With the advent of Uniform Taxation in 1942, the States withdrew from the income tax field. While the Commonwealth remains the sole government imposing taxes on income, tax sharing arrangements have been made under which State and Local Government bodies receive a share of Commonwealth revenue.

The laws dealing with the assessment and imposition of income tax at 30 June 1985 were—*Income Tax Assessment Act 1936* (later referred to as 'the Assessment Act'); Acts declaring rates of tax—*Income Tax (Rates) Act 1982*, *Income Tax (Individuals) Act 1984*, *Income Tax (Companies, Corporate Unit Trusts and Superannuation Funds) Act 1984*, *Income Tax (Non-resident Companies) Act 1978*, *Income Tax (Dividends and Interest Withholding Tax) Act 1974*, *Income Tax (Drought Bonds) Act 1969*, *Income Tax (Withholding Tax Recoupment) Act 1971*, *Income Tax (Bearer Debentures) Act 1971*, *Income Tax (Mining Withholding Tax) Act 1979*, *Income Tax (Film Royalties) Act 1977*, *Income Tax (Diverted Income) Act 1981*, *Medicare Levy Act 1984* and Income Tax Regulations.

Both individuals and companies are liable for income tax. Private companies are subject to tax on certain undistributed income in addition to the primary income tax levied on all companies.

The operation of the Assessment Act is affected by other Acts, the more important of which are:

- (a) *Taxation Administration Act 1953*, which provides for the administration of certain Acts relating to taxation and the screening for taxation purposes of applications for exchange control approval.
- (b) *Income Tax (International Agreements) Act 1953*, which gives the force of law to agreements with other countries for the avoidance of double taxation. Australia has concluded comprehensive agreements for the avoidance of double taxation with the United Kingdom, the United States of America, Canada, New Zealand, Singapore, Japan, the Federal Republic of Germany, the Netherlands, France, Belgium, the Philippines, Switzerland, Malaysia, Sweden, Denmark, Ireland, Norway, the Republic of Korea and Malta. In addition, as at 30 June 1985 a comprehensive agreement with Italy had been signed but had not entered into force. Limited agreements dealing with airline profits have been concluded with France, Italy, Greece and India.
- (c) Taxation (Unpaid Company Tax) Assessment Act and related legislation.
- (d) *The States (Tax Sharing and Health Grants) Act 1981*, which provides for the States and Northern Territory to receive a proportion of total Commonwealth tax collections.
- (e) *Income Tax (Arrangements with the States) Act 1978*, which enables each State to increase or reduce personal income tax levied on residents of the State.
- (f) *International Organizations (Privileges and Immunities) Act 1963*, and Regulations made under that Act, which provide for the exemption from income tax of certain income of international organizations and their officials.
- (g) *Diplomatic Privileges and Immunities Act 1967*, which provides for the exemption from income tax of certain income of diplomatic representatives, their staff and families.
- (h) *Consular Privileges and Immunities Act 1972*, which provides for the exemption from tax of certain income of consular representatives, their staff and families.
- (i) *The Loan (Income Equalization Deposits) Act 1976*, which provides for the making of interest bearing income equalization deposits by primary producers with the Commissioner of Taxation.
- (j) *Taxation (Interest on Overpayments) Act 1983*, which provides for the payment of interest on certain refunds of tax.
- (k) *Loan (Drought Bonds) Act 1969*, which authorizes the issue of drought bonds and empowers the Commissioner of Taxation to declare when drought bonds have become redeemable.
- (l) *Banking Act 1959* and Regulations, under which certain exchange control applications are screened to prevent avoidance and evasion of Australian taxes.
- (m) *The Crimes (Taxation Offences) Act 1980*, which established a number of criminal offences relating to the fraudulent evasion of income tax (and sales tax) by stripping companies or trusts of their capacity to pay.

- (n) *Local Government (Personal Income Tax Sharing) Act 1976*, which provides for local government bodies in the States to receive a specified proportion of net personal income tax collections.

A resident individual is required to lodge a return of income when his total income from all sources in Australia is in excess of \$4,595 in 1984-85. However, in the case of a resident minor i.e., a person under the age of 18 years at the end of the year of income, a return is to be lodged where income exceeds \$416. Except in the case of a non-resident in receipt of a taxable Australian social security or repatriation pension, allowance or benefit (in which case the position is the same as for a resident), a non-resident individual is required to lodge a return of income where his total income (other than dividends or interest on which withholding tax has been paid) from all sources in Australia is \$1 or more.

Non-profit companies with total incomes in excess of \$416 and all other companies, partnerships and trusts deriving income are required to lodge returns of income each year.

Where applicable, income tax payable is assessed and assessment notices showing the amounts payable are issued during the year following the year of income. For individuals the approximate amount payable, however, has already been collected during the income year (from employees by deductions from salary or wages and from non-employees by a provisional tax and in some cases by deductions from prescribed payments). The amount shown on the assessment notice is therefore adjusted against the amount already paid, and any difference is either collected or refunded.

#### **Taxes on income—individuals**

##### *Pay-as-you-earn-system*

*Salary and wage earners* are subject to tax instalment deductions by employers according to prescribed scales which show the amount to be deducted according to income. Under the group employer scheme, the amount deducted is required to be regularly remitted to the Australian Taxation Office.

Not later than 14 July each year, employers are required to supply each employee with a group certificate showing the amount earned and deductions made during the year ended 30 June.

Under the tax stamp scheme for employers other than group employers, a tax deduction sheet in two parts is used. Every four weeks the employer purchases tax stamps for the amount of deductions made each pay day and attaches the tax stamps to the tax stamps sheet in the space provided and the tax checks (attached to the stamps) in the space provided on the tax check sheet. At the end of the year the employer gives the employee the tax stamp sheet and sends the tax check sheet to the Taxation Office. The tax stamp sheet is then used in the same way as a group certificate.

*Individuals with taxable income other than salary or wages of \$1,000 or more* in 1984-85 may be required to pay provisional tax in respect of that income. Provisional tax is not generally charged, however, where tax instalment (PAYE) deductions made in the previous income year exceeded 95 per cent of the net tax payable for that year and provisional tax was not imposed previously. The provisional amount is intended as an approximation to the tax which will be assessed after the return of income for the current year has been lodged. In order to account for an expected rise in provisional incomes in 1985-86, provisional tax is calculated using 1985-86 rates of tax applied to 1984-85 income increased by 11 per cent. The provisional amount is intended as an approximation to the tax which will be assessed after the return of income for the current year has been lodged. The assessment notice shows the tax assessed on income from the previous year less any provisional tax already paid for that year and provisional tax payable for the current year. Taxpayers may apply to vary the amount of provisional tax imposed if his or her circumstances change during the year.

##### *Prescribed payment system*

As from 1 September 1983, a new system applies for collecting tax from certain payments for work or services not covered by the pay-as-you-earn system. In general terms, prescribed payments are payments made by contractors to sub-contractors operating within certain industries. The person who makes the payment (payer) is required to deduct the appropriate amount of tax from the payment and forward it to the Taxation Office. Where tax has been deducted from a payment, it does not represent the final tax liability of the payee, i.e., the person who receives the payment from the payer. However, a credit is allowed in the payee's income tax assessment in the same way as a credit is allowed for PAYE deductions and provisional tax.

*Medicare levy*

As from 1 February 1984, a Medicare levy is payable on the taxable income of Australian residents. Its introduction coincides with the implementation of the Medicare health scheme. The rate of the levy is 1% of taxable income. From 1 February 1984 to 30 June 1985 the amount of levy payable was subject of a ceiling, i.e., the maximum amount payable. For 1984-85, the ceiling was \$733.32.

*Assessable income—individuals*

Assessable income (from which deductions are made to arrive at taxable income) basically includes all receipts within the ordinary meaning of the word 'income', but excludes items of income that are specified as exempt. Assessable income specifically includes certain receipts such as casual profits arising from the sale of property held less than one year and profits arising from the sale of property acquired for the purpose of profit-making by sale regardless of the period the property is held before sale. The value to employees of allowances and benefits given by employers for services rendered is also specifically included in the assessable income of the employees. Receipts such as gifts (other than gratuities received by an employee in the course of employment), legacies, lottery wins and other receipts of capital generally do not form part of the assessable income.

Exemption from tax is provided by the Assessment Act in respect of a number of specified classes of income—for example, certain war pensions; invalid pensions; family allowances; income received from a scholarship, bursary or other educational allowance; the income of charitable institutions and public hospitals, certain foreign income where it has been taxed overseas, and income of certain Australian residents derived from personal services performed overseas.

*Deductions*

The taxable income to which the rates of tax are applied is arrived at by deducting from the assessable income any allowable deductions.

Deductions from assessable income are authorised for losses and outgoings incurred in gaining or producing assessable income or necessarily incurred in carrying on a business for that purpose except to the extent that they are of a capital, private or domestic nature, are incurred in gaining or producing exempt income, or are of the kinds that are specifically declared to be not deductible by provisions of the Assessment Act. In addition, certain other deductions are specifically authorised by the Assessment Act.

Deductions allowable include trading losses incurred in previous years, bad debts, depreciation, gifts to various institutions and, in certain circumstances, rates and land taxes paid. Expenditure of a capital nature incurred under a contract entered into after 19 July 1982 in relation to mining operations, is eligible for deduction on a straight line basis by reference to the lesser of 10 years or the estimated life of the mine or oil field. Expenditure on mining plant may also be written off on that basis or, if the taxpayer chooses, by depreciation allowances. Exploration or prospecting expenses incurred by general (non-petroleum) mining companies are allowable as deductions against net assessable income from mining activities in the year in which the expenditure is incurred. Expenditure on exploration or prospecting for petroleum is immediately deductible against income from any source. Deductions are available for the cost of converting or replacing certain oil fired industrial equipment to other energy sources provided the expenditure is incurred before 1 July 1984 and the taxpayer contracted for the conversion or replacement, or commenced the conversion or replacement himself, before 20 May 1983.

A special loading applies to increase the depreciation rates on eligible plant. For plant contracted for on or after 1 May 1981 the loading is set at 18 per cent. New and second hand plant (excluding structural improvements and motor vehicles of a kind previously excluded from the 18 per cent loading) acquired under a contract entered into, or the construction of which by the taxpayer commenced, after 19 July 1982 is to be depreciated on a prime cost basis at a rate of either 20 per cent or 33½ per cent. The 20 per cent rate applies to eligible plant of a kind that under the previous system qualified for depreciation at a prime cost rate (including the 18 per cent loading) of 20 per cent or less, and the 33½ per cent applies where the previous prime cost rate was greater than 20 per cent. Where applicable, the investment allowance continues to be available and, in cases where the previous depreciation arrangements confer greater benefits than under the present scheme, a taxpayer is entitled to retain the previous arrangements.



Certain expenditure of a capital nature incurred before 24 August 1983 by primary producers in carrying out improvements to their land is deductible over 10 years. Capital expenditure on certain soil conservation operations is allowable in full in the income year in which the expenditure is incurred. Certain expenditure in connection with conserving or conveying water for use in a business of primary production is deductible in the year of expenditure. Expenditure incurred by a primary producer before 1 July 1986 in constructing stockyard or subdivisional fences where their construction is certified as being desirable for the eradication or control of bovine brucellosis or tuberculosis is also deductible in the year of expenditure.

Certain new items of plant and machinery acquired for use in a business of primary production are depreciable at a prime cost rate of 20 per cent, as are certain structural improvements for the storage of hay, grain or fodder. The rate applicable was increased to 33½ per cent for such property acquired or commenced to be constructed, during the period 20 July 1982 to 19 May 1983. After 19 May 1983, the rate reverted to 20 per cent.

Deductions may also be allowed in respect of expenditure on certain plant and machinery by way of an investment allowance. The allowance is available at a rate of 18 per cent on the qualifying expenditure for plant which was contracted for on or before 1 July 1985.

Deductions are also allowable for the capital cost of connecting mains electricity to a property on which a business is carried on. A 100 per cent depreciation allowance is available for the cost of certain plant used in Australia exclusively to store fuel held for use in a business as fuel or as trading stock for disposal. Special concessions involving a deduction loading and income exemption are available for capital investment in the production of certain new Australian films.

Depreciation allowances in respect of new non-residential income-producing buildings are available at the rate of 2½ per cent per annum in respect of the construction cost of eligible buildings where construction of the buildings commenced after 19 July 1982 and before 21 August 1984. Where the construction commenced after 21 August 1984 the rate is 4 per cent per annum.

Deductions are allowable for eligible capital subscriptions paid after 14 September 1983 to companies (known as MICs) that have been granted a licence under the *Management and Investment Companies Act 1983*. The deduction is allowable in the year of income in which payments are made on application for and allotment of shares, and on subsequent calls. In order to retain the full benefit of the deduction, the subscriber is required to retain ownership of the shares for a 4 year period commencing on the date on which the shares become fully paid-up or, in the case of shares that a subscriber disposes of when they are only partially paid-up, commencing on the last date on which a share subscription was paid.

*Living-away-from-home allowance.* Where an allowance is paid to an employee under any award, industrial agreement, etc.—

- (a) if it is received in cash and does not exceed \$7 per week, a deduction is allowable of the amount of the allowance, up to \$5 per week;
- (b) if it is received otherwise than in cash and exceeds a value of \$2 per week but does not exceed a value of \$5 per week, a deduction is allowable of the excess of that value over \$2 per week.

In any other case the deduction allowable is the amount which the Commissioner deems reasonable but may not exceed the total amount received less \$2 per week.

*Subscriptions.* When they are paid in respect of membership of any trade, business or professional association or union.

*Gifts.* Those of \$2 and upwards made to specified funds, authorities and institutions including public benevolent institutions, approved research institutions for scientific research, building funds for schools conducted by non-profit organisations, certain approved voluntary overseas aid organisations etc.

*Superannuation contributions* of eligible self-employed persons and employees not covered by funds to which any other person contributes for their benefit that are paid after 19 August 1980 to approved funds are deductible to a maximum \$1,200 in any one year of income. Any excess of contributions over \$1,200 falls for consideration under the superannuation provisions subject to concessional rebate (see page 000).

### *Rebates of Tax*

From the gross amount of tax calculated by applying the relevant rate to the taxpayer's taxable income, a deduction is made for any rebates allowable to the taxpayer.

*Dependant, housekeeper and sole parent rebates.* A concessional rebate of the relevant amount specified below for each *dependant* is allowable to a resident taxpayer if, during the whole of the year of income, the taxpayer is the sole contributor to the dependant's maintenance and that dependant does not have a separate net income in excess of \$282.

<i>Dependant</i>	<i>Maximum rebate 1984-85</i>
	\$
Spouse or daughter-housekeeper—where there is a dependent child or student child . . . . .	1,030
Spouse or daughter-housekeeper—where there is not a dependent child or student child . . . . .	830
Parent or parent-in-law . . . . .	749
Invalid relative . . . . .	376

If a person in one or other of these dependant categories is a dependant during part only of the year of income (such a person residing with the taxpayer is ordinarily regarded as a dependant throughout the period of residence), the maximum rebate is proportionately reduced. Rebates for a parent, parent-in-law or invalid relative are allowable only in respect of residents of Australia.

Where a person has a separate net income in excess of \$282 while a dependant of a taxpayer, the rebate otherwise allowable is reduced by \$1 for every complete \$4 by which the separate net income exceeds \$282, irrespective of the period over which the person has derived the income. When two or more people contribute to the maintenance of a person who is a dependant of both of them, the rebate allowable is apportioned between the contributing taxpayers.

A concessional rebate is allowable to a resident taxpayer in respect of a *housekeeper* who, during the whole of the year of income, is wholly engaged in keeping house in Australia for the taxpayer and has the care of (a) a child or step-child of the taxpayer, less than 16 years of age; (b) an invalid relative in respect of whom the taxpayer is entitled to a rebate or any child under 16 years classed as a dependant for this purpose; or (c) the taxpayer's spouse if in receipt of an invalid pension under the *Social Security Act*. Where there is a dependant child or student, the maximum rebate for 1984-85 is \$1,030, otherwise it is a maximum of \$830. A child under 16 years referred to in (b) will be classed as a dependant where the taxpayer contributes to that child's maintenance and the child's separate net income is less than \$1,786.

If these conditions apply for only part of the year, a proportionate rebate may be allowed. Where the taxpayer is married, a rebate may be allowable for a housekeeper if the housekeeper is engaged in caring for an invalid spouse (*see* (c) above) or the Commissioner is of the opinion that, because of special circumstances, it is just to allow a rebate. The rebate is not allowable in respect of any period during which the taxpayer is entitled to a deduction for a daughter-housekeeper.

A concessional rebate of \$780 is allowable to a *sole parent* i.e., a resident single, widowed or divorced person who has the sole care of a child under 16 years of age or a student (up to 25 years of age, receiving full-time education at a school, college or university), whose separate net income is ordinarily less than \$1,786. The sole parent rebate is not allowable where the taxpayer is entitled to a rebate for a housekeeper or daughter-housekeeper or is living in a de-facto relationship.

#### *Concessional rebates*

Resident taxpayers may be allowed a concessional rebate in respect of certain expenses listed below amounting in total to more than \$2,000. The amount of the rebate for 1984-85 is 30 per cent of the excess of the total expenditure over \$2,000, but the rebate cannot exceed the tax otherwise payable.

*Medical, dental, optical, etc. expenses.* Rebates are allowable in respect of medical, dental, optical and therapeutic treatment expenses paid by the taxpayer, less any amounts in respect of those expenses which are received or receivable by the taxpayer or any other person from a Government or friendly society or medical benefit fund. Included are amounts paid in respect of artificial limbs and eyes, hearing aids and medical and surgical appliances and the remuneration of an attendant of a person who is blind or permanently confined to a bed or invalid chair. Domiciliary nursing care benefits are to be disregarded in calculating the rebatable amount in respect of medical expenses.

Rebates in respect of the above medical, etc. expenses are allowable only for expenditure in respect of a resident taxpayer, spouse, children under 21 years of age or any other 'dependant' resident in Australia, but not a 'housekeeper'.

*Funeral, burial or cremation expenses.* Rebates are allowable only in respect of the taxpayer's spouse, children under 21 years of age or any other 'dependant', but not a 'housekeeper', provided the dependant was a resident of Australia at the time of death. The amount of expenses allowable in respect of any one dependant is limited to \$100.

*Adopted children.* Legal expenses and court costs of the kind normally incurred by a taxpayer in adopting a child.

*Payments of life, sickness and accident insurance premiums and payments to a Friendly Society, Superannuation, Sustentation or similar Fund.* Amounts subject to rebate are limited to a total of \$1,200 in respect of such payments made on behalf of the taxpayer, his spouse or children. In the case of self-employed and 'unsupported' employees contributions that are deductible, the excess over \$1,200 not allowed as a deduction may be allowed as a rebate within the \$1,200 limit on such rebatable expenditure. Where policies are taken out on or after 1 January 1973 or where the first premium of a policy was paid on or after that date, rebates for premiums of such policies are *not* allowable if the benefits, other than death benefits, are payable within a period of 10 years of commencement of risk. Where a policy taken out on or after 1 January 1973 is surrendered within 10 years of commencement, rebates or deductions allowed for premiums payable in the previous 5 years are disallowed unless the forfeiture or surrender is due to serious financial difficulties.

*Education expenses.* An amount not exceeding \$250 is allowed in respect of each child of the taxpayer or 'dependant' under 25 years of age receiving full-time education. Education expenses include expenditure for recognised school uniforms, on school fees, board and accommodation, text books, stationery, equipment and fares.

*Self-education expenses.* These are allowable where they are paid by the taxpayer for or in connection with a course of education undertaken by him/her for the purpose of gaining qualifications for use in carrying on a profession, business or trade or in the course of employment. The maximum amount subject to rebate is \$250.

*Calls.* One-third of the amount of calls paid by the taxpayer in the year of income on shares owned by him/her in a company carrying on as its principal business afforestation in Australia.

*Rates and land taxes.* These are allowable when they are paid by a taxpayer who is personally liable. The maximum amount rebatable is \$300 and must be in respect of a sole or principal place of residence.

#### *Other rebates*

*Zone allowance rebate.* A separate rebate is allowable to resident taxpayers who have resided in Zone A or B (prescribed isolated areas) for more than one half of the income year. The rebates are as follows:

- (a) Ordinary Zone A: A rebate equal to the sum of \$252 and 50 per cent of rebates for dependants as a sole parent or for a housekeeper;
- (b) Ordinary Zone B: A rebate equal to the sum of \$42 and 20 per cent of those rebates;
- (c) Special Zone A: A rebate equal to the sum of \$875 and 50 per cent of those rebates; and
- (d) Special Zone B: A rebate equal to the sum of \$875 and 20 per cent of those rebates.

The special zone rebate is available to a taxpayer residing or spending the required period in a zone area but at a place in excess of 250 kilometres by the shortest practicable surface route from the centre of a population centre of 2,500 or more (based on 1976 census data).

As from 1 May 1984, a remote area allowance is paid to certain social security and repatriation pensioners living in Zone A (including Special Zone A) and it is exempt from income tax. To ensure that the sum of the non-taxable remote area allowance and the income tax zone rebate received by a person in an income year does not exceed the amount which that person would receive if entitled to only one of the benefits, the allowance is to be deductible from the maximum claimable value of any income tax zone rebate to which the recipient would otherwise be entitled.

The rebates for dependants, as a sole parent or for a housekeeper that may be the subject of a percentage increment to the basic zone allowance, are:

		1984-85	
			\$
Sole parent . . . . .		780	
Housekeeper . . . . .	(a)	830	
Spouse, daughter-housekeeper . . . . .	(a)	830	
Parent or parent-in-law . . . . .		749	
One child under 16 years, not being a student . . . . .		376	(b)
Each other child under 16 years, not being a student . . . . .		282	
Student . . . . .		376	
Invalid relative . . . . .		376	

(a) Where there is a dependent child under 16 or a student child under 25, the maximum rebate will be \$1,030. (b) Where one of these persons has a separate net income in excess of \$282 while a dependant of a taxpayer, the amount to be taken into account is reduced by \$1 for every complete \$4 by which that income exceeds \$282, irrespective of the period over which it was derived. Where two or more people contribute to the maintenance of a person who is a dependant of both of them, the amount to be taken into account is apportioned between the contributing taxpayers.

Amounts for a parent, parent-in-law or invalid relative are allowable only in respect of resident dependants.

'Child' or 'children' includes a legally adopted child, a step-child or ex-nuptial child of the taxpayer. 'Student' means a person less than 25 years of age who is receiving full-time education at a school, college or university.

**Overseas service rebate.** Separate rebates are also allowable to certain members of the Defence Force serving in prescribed overseas localities. Where the period of service is more than one-half of the year of income, the rebate is equal to the Ordinary Zone A rebate. Where the period is less than one-half of the year of income, a proportionate part of the Ordinary Zone A rebate is allowable.

**Unused leave rebate.** Where a taxpayer's taxable income exceeds \$19,500 and includes lump sum payments in consequence of termination of employment or retirement for unused annual leave or unused long service leave attributable to service after 15 August 1978 or both, a rebate is allowable to limit the marginal rate on such payments to the standard rate of 30 per cent.

**Lump sum superannuation and kindred payments rebate.** Lump sum superannuation and kindred payments received after 30 June 1983, for services rendered after that date, are included in assessable income in full. Where a person is aged 55 or more, the first \$50,000 of such lump sums is taxed at a rate no greater than 15 per cent and the remainder is taxed at 30 per cent. For such lump sums received by a person aged less than 55, a maximum rate of tax of 30 per cent applies. The part of a lump sum comprising a person's own contributions after 30 June 1983 for which no tax deduction has been allowed is not subject to tax. Special arrangements apply to bona fide redundancy payments, approved early retirement scheme payments and invalidity payments. Lump sums are also free of tax where they are transferred into another superannuation fund or an approved deposit fund or are used to purchase an annuity.

**Capital subscription rebate.** Section 160ACA of the Income Tax Assessment Act provides for a rebate of tax to shareholders in respect of capital subscribed to certain petroleum exploration and mining companies. The rebate allowable is 27 cent for each \$1 of amounts paid on shares after 30 April 1981 by way of application and allotment moneys and calls which are applied by a company towards the paid-up value of its shares. The allowance of the rebate is conditional upon the company lodging a declaration satisfying the Commissioner that the share moneys will be, or have been, spent on outgoings for exploration for petroleum and the development of petroleum fields. It is also conditional upon the company forgoing any right to a deduction under Division 10AA for the expenditure.

**Pensioner Rebate.** A limited rebate is allowable for taxpayers in receipt of an Australian social security or repatriation pension on which Australian income tax is payable. The maximum rebate of \$250 for 1984-85 means that no tax will be payable on taxable income up to \$5,428. The rebate is gradually reduced where taxable income exceeds \$5,428 until it fully shades out at a taxable income of \$7,428 for 1984-85.

**Beneficiary Rebate.** A rebate is allowable for taxpayers in receipt of Australian social security unemployment, sickness or special benefit. The maximum rebate for a married taxpayer for the 1984-85 year is \$75 when the taxable income does not exceed \$7,990. The rebate is reduced by 12.5c for every dollar by which the taxable income exceeds \$7,990. For an unmarried taxpayer the maximum rebate allowable for the 1984-85 year is \$50 when the taxable income does not exceed \$4,783. The rebate is reduced by 12.5c for every dollar by which the taxable income exceeds \$4,783.

*Home Loan Interest Rebate.* A rebate was available in 1984–85 to home owners who first occupied a dwelling as their sole or principal residence in Australia on or after 1 July 1979 and on or before 30 September 1983. Taxpayers who contracted to acquire or build or commence to build, on or before 30 September 1983, were brought within the scheme even though they occupied the dwelling after 30 September 1983. (This transitional measure to extend entry into the scheme protects those first home buyers who are not eligible for assistance under a New Cash Subsidy Scheme for First Home Owners.)

Entitlement to a rebate is subject to an income test. The income test applies in such a way that benefits will be available in full to taxpayers whose 'family incomes' in the 1982–83 income year are \$24,300 or less, shading out proportionately for family incomes up to \$27,900. No rebate is available where a taxpayer's family income in 1982–83 was \$27,900 or greater.

The rebate is 30 per cent of qualifying interest subject to an upper limit of \$500 in the first full year of occupancy, reducing by \$100 per year during the following four years. The upper limit is increased by \$200 where the dwelling is also the home of a dependent child or dependent student child of the taxpayer.

*Averaging rebate—see Income of Primary Producers.*

*Government loan interest rebate.* Interest derived from bonds, etc., issued between 1 January 1940 and 31 October 1968 by the Commonwealth Government, or on certain State semi-government loans issued free of State income tax, be subject to a rebate of income tax of 10 cents for each \$1 of interest received. The rebate does not apply to interest received from bonds, etc., issued on or after 1 November 1968.

#### *Effective exemption from tax*

For the income years 1972–73 to 1974–75 inclusive the income of a taxpayer without dependants was exempt from income tax if it did not exceed \$1,040. In 1975–76 and 1976–77, after the application of the general concessional rebate of \$540 and \$610 respectively to resident taxpayers, the corresponding figures were \$2,518 and \$2,845. In 1977–78, with the composite tax scale applying, the figure was \$3,402. For 1978–79 and 1979–80 no tax was payable unless taxable income exceeded \$3,893 and for 1980–81 no tax was payable unless taxable income exceeded \$4,041 (except in the case of certain minors). For 1981–82 no tax was payable unless taxable income exceeded \$4,195 (except in the case of certain minors). In 1982–83 (except for certain minors) no tax was payable unless taxable income exceeded \$4,462 in the case of a resident taxpayer or \$585 in the case of most non-resident taxpayers. For 1983–84 and 1984–85 (except for certain minors) no tax is payable unless taxable income exceeds \$4,595 in the case of a resident taxpayer; for most non-residents, tax is payable where taxable income is \$1 or more. The effect of deductions or rebates for dependants was to exempt resident taxpayers up to the incomes shown in the following table.

#### RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM INCOME TAX

(\$)

Income years ended June—	Taxpayer with—			
	No dependants	Wife	Wife and one child	Sole parent
1980 . . . . .	3,893	5,698	5,698	5,153
1981 . . . . .	4,041	6,541	6,541	5,787
1982 . . . . .	4,195	6,788	6,788	6,007
1983 . . . . .	4,462	7,168	7,601	6,786
1984 . . . . .	4,595	7,361	8,028	7,195
1985 . . . . .	4,595	7,708	8,457	7,520

**Rates of tax—individuals**

The rates of tax on taxable incomes derived by both resident and non-resident individuals during the year ending 30 June 1985 (or substituted accounting period) are set out below. As from 17 August 1982 the tax-free threshold was withdrawn from non-resident taxpayers, other than those in receipt of taxable Australian social security and repatriation pensions.

**GENERAL RATES OF TAX—RESIDENT INDIVIDUALS  
1984-85 FINANCIAL YEAR, 1984-85 INCOME YEAR**

<i>Total taxable income</i>		
<i>Not less than—</i>	<i>Not more than—</i>	<i>Tax at general rates on total taxable income</i>
\$	\$	\$
0	4 595	Nil
4 595	12 500	Nil + 26.67c for each dollar in excess of \$4 595.
12 500	19 500	2 108.26 + 30c for each dollar in excess of \$12 500.
19 500	28 000	4208.26 + 46c for each dollar in excess of \$19 500.
28 000	35 000	8118.26 + 47.33c for each dollar in excess of \$28 000.
35 000	35 788	11431.36 + 55.33c for each dollar in excess of \$35 000.
35 788		11867.36 + 60c for each dollar in excess of \$35 788.

**GENERAL RATES OF TAX—NON-RESIDENT INDIVIDUALS  
1984-85 FINANCIAL YEAR, 1984-85 INCOME YEAR**

<i>Total taxable income</i>		
<i>Not less than—</i>	<i>Not more than—</i>	<i>Tax at general rates on total taxable income</i>
\$	\$	\$
0	19 500	30c for each dollar
19 500	28 000	5 850 + 46c for each dollar in excess of \$19 500
28 000	35 000	9 760 + 47.33c for each dollar in excess of \$28 000.
35 000	35 788	13073.10 + 55.33c for each dollar in excess of \$35 000.
35 788		13509.10 + 60c for each dollar in excess of \$35 788.

Rates of income tax for years prior to 1984-85 may be obtained by reference to previous Year Books as indicated in the table below.

<i>Income Year</i>	<i>Published in Year Book</i>	
	<i>Number</i>	<i>Page</i>
1954-55 to 1973-74 . . . . .	60	590
1974-75 and 1975-76 . . . . .	61	586
1976-77 and 1977-78 . . . . .	62	593
1978-79 . . . . .	63	529
1979-80 . . . . .	64	604
1980-81 . . . . .	65	567
1981-82 . . . . .	66	575
1982-83 . . . . .	67	613
1983-84 . . . . .	68	510

**Income of Certain Minors**

Special provisions in Division 6AA of the Assessment Act may apply to income, whether derived directly or through a trust, of a minor—a person who is under the age of 18 years at the end of the year of income. A minimum rate of tax equal to 46 per cent in 1984-85 is imposed on the eligible income of resident minors (subject to shading-in arrangements) where the income exceeds \$416. For the 1984-85 year, tax is payable by a non-resident minor on all eligible taxable income. Where eligible income does not exceed \$416, it is taxed at the rate of 30 per cent, except where the ordinary rate applicable to the eligible taxable income is greater. Subject to shading-in arrangements the eligible taxable income of a non-resident minor in excess of \$416, is subject to a minimum rate of tax of 46 per cent.

**Abnormal income**

The taxable income, including abnormal receipts, of actors, artists, inventors, etc., is taxed at the rate appropriate to the normal taxable income plus one-third of the abnormal receipts.

*Income of Primary Producers*

A modified averaging system applied in 1983-84 and subsequent income years. Under the new arrangements taxpayers pay tax on taxable income from primary production at the average rate of tax (the rate of tax obtained by applying ordinary tax rates to the average of taxable incomes of the current year and, as a general rule, each of the previous four years in which the taxpayer was engaged in primary production) regardless of whether the application of the averaging system in a particular year is of benefit to the taxpayer in that year. An election is available for a primary producer to permanently opt out of the averaging system, and to thereafter pay tax calculated at ordinary rates.

A special averaging rebate is allowed to be subtracted from ordinary tax where a primary producer's taxable income exceeds the average income. Complementary tax is payable when the taxpayer's average income is greater than his or her taxable income to bring the tax on primary production income up to the level of tax at average rates.

*Income tax payable on specified incomes at general rates*

The following table shows, for the income years 1979-80 to 1984-85, the actual income tax payable by resident taxpayers with various incomes and numbers of dependants.

**COMMONWEALTH INCOME TAX PAYABLE ON SPECIFIED RESIDENT INDIVIDUAL INCOMES  
1979-80 TO 1984-85 INCOME YEARS**

(\$)

<i>Net Income (a)</i>	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
<b>TAXPAYER WITH NO DEPENDANTS</b>						
<b>\$</b>						
3,000 . . . . .	..	..	..	..	..	..
5,000 . . . . .	366.08	306.88	257.60	165.00	121.50	108.01
7,000 . . . . .	1,027.48	946.88	897.60	778.40	721.50	641.41
10,000 . . . . .	2,019.58	1,906.88	1,857.60	1,698.50	1,621.50	1,441.51
15,000 . . . . .	3,673.08	3,506.88	3,457.60	3,232.00	3,121.50	2,858.26
20,000 . . . . .	5,801.46	5,493.42	5,352.44	4,916.99	4,701.50	4,438.26
<b>TAXPAYER WITH DEPENDANT WIFE</b>						
3,000 . . . . .	..	..	..	..	..	..
5,000 . . . . .	..	..	..	..	..	..
7,000 . . . . .	430.48	146.88	67.60	..	..	..
10,000 . . . . .	1,422.58	1,106.88	1,027.60	868.50	791.50	611.51
15,000 . . . . .	3,076.08	2,706.88	2,627.60	2,402.00	2,291.50	2,028.26
20,000 . . . . .	5,204.46	4,693.42	4,522.44	4,086.99	3,871.50	3,608.26

(a) Income remaining after allowing all deductions other than concessional deductions.

*Income tax assessments—Individuals*

The following tables show for the 1982-83 income year the number of taxpayers, taxable income, and net income tax assessed for individuals.

**COMMONWEALTH INCOME TAX ASSESSMENTS (a): TAXABLE INDIVIDUALS BY GRADE OF  
TAXABLE INCOME**

(Income derived in the year 1982-83)

<i>Grade of taxable income</i>	<i>Number of Taxpayers</i>			<i>Net income (b)</i>	<i>Taxable income (c)</i>	<i>Net tax</i>
	<i>Males</i>	<i>Females</i>	<i>Total</i>			
<b>\$</b>				<b>\$'000</b>	<b>\$'000</b>	<b>\$'000</b>
Under 4,463 . . . . .	4,682	3,884	8,566	17,597	17,239	3,672
4,463- 4,999 . . . . .	44,922	72,025	116,947	570,630	554,079	9,187
	<b>49,604</b>	<b>75,909</b>	<b>125,513</b>	<b>588,227</b>	<b>571,318</b>	<b>12,859</b>
5,000- 5,999 . . . . .	143,559	219,108	362,667	2,041,261	1,994,485	88,789
	<b>193,163</b>	<b>295,017</b>	<b>488,180</b>	<b>2,629,488</b>	<b>2,565,803</b>	<b>101,648</b>
6,000- 6,999 . . . . .	137,094	181,326	318,420	2,120,119	2,065,920	171,901
	<b>330,257</b>	<b>476,343</b>	<b>806,600</b>	<b>4,749,607</b>	<b>4,631,723</b>	<b>273,549</b>
7,000- 7,999 . . . . .	135,605	166,677	302,282	2,329,387	2,267,584	241,782
	<b>465,862</b>	<b>643,020</b>	<b>1,108,882</b>	<b>7,078,994</b>	<b>6,899,308</b>	<b>515,331</b>
8,000- 8,999 . . . . .	138,568	154,438	293,006	2,555,890	2,488,798	310,064
	<b>604,430</b>	<b>797,458</b>	<b>1,401,888</b>	<b>9,634,884</b>	<b>9,388,106</b>	<b>825,395</b>
9,000- 9,999 . . . . .	136,102	146,049	282,151	2,755,620	2,680,008	381,112

COMMONWEALTH INCOME TAX ASSESSMENTS (a): TAXABLE INDIVIDUALS BY GRADE OF  
TAXABLE INCOME—*continued*  
(Income derived in the year 1982-83)

Grade of taxable income	Number of Taxpayers			Net income (b)	Taxable income (c)	Net tax
	Males	Females	Total			
	<b>740,532</b>	<b>943,507</b>	<b>1,684,039</b>	<b>12,390,504</b>	<b>12,068,114</b>	<b>1,206,507</b>
10,000-10,999 . . . . .	138,331	146,714	285,045	3,077,277	2,993,177	469,034
	<b>878,863</b>	<b>1,090,221</b>	<b>1,969,084</b>	<b>15,467,781</b>	<b>15,061,291</b>	<b>1,675,541</b>
11,000-11,999 . . . . .	144,814	150,750	295,564	3,496,573	3,401,210	572,430
	<b>1,023,677</b>	<b>1,240,971</b>	<b>2,264,648</b>	<b>18,964,353</b>	<b>18,462,501</b>	<b>2,247,971</b>
12,000-12,999 . . . . .	169,223	165,576	334,799	4,299,225	4,188,230	744,004
	<b>1,192,900</b>	<b>1,406,547</b>	<b>2,599,447</b>	<b>23,263,579</b>	<b>22,650,731</b>	<b>2,991,975</b>
13,000-13,999 . . . . .	196,525	167,561	364,086	5,040,113	4,914,923	907,175
	<b>1,389,425</b>	<b>1,574,108</b>	<b>2,963,533</b>	<b>28,303,692</b>	<b>27,565,654</b>	<b>3,899,150</b>
14,000-14,999 . . . . .	209,892	141,436	351,328	5,225,517	5,092,215	967,014
	<b>1,599,317</b>	<b>1,715,544</b>	<b>3,314,861</b>	<b>33,529,210</b>	<b>32,657,869</b>	<b>4,866,164</b>
15,000-15,999 . . . . .	215,186	119,019	334,205	5,318,743	5,178,377	1,009,803
	<b>1,814,503</b>	<b>1,834,563</b>	<b>3,649,066</b>	<b>38,847,953</b>	<b>37,836,246</b>	<b>5,875,967</b>
16,000-16,999 . . . . .	213,270	93,853	307,123	5,207,703	5,065,096	1,010,271
	<b>2,027,773</b>	<b>1,928,416</b>	<b>3,956,189</b>	<b>44,055,656</b>	<b>42,901,342</b>	<b>6,886,238</b>
17,000-17,999 . . . . .	204,336	77,307	281,643	5,064,857	4,926,882	1,005,955
	<b>2,232,109</b>	<b>2,005,723</b>	<b>4,237,832</b>	<b>49,120,513</b>	<b>47,828,224</b>	<b>7,892,193</b>
18,000-18,999 . . . . .	186,685	60,225	246,910	4,692,773	4,564,653	953,817
	<b>2,418,794</b>	<b>2,065,948</b>	<b>4,484,742</b>	<b>53,813,286</b>	<b>52,392,877</b>	<b>8,846,011</b>
19,000-19,999 . . . . .	168,831	52,955	221,786	4,443,532	4,322,195	931,677
	<b>2,587,625</b>	<b>2,118,903</b>	<b>4,706,528</b>	<b>58,256,819</b>	<b>56,715,073</b>	<b>9,777,688</b>
20,000-21,999 . . . . .	278,294	76,622	354,916	7,647,931	7,435,363	1,701,288
	<b>2,865,919</b>	<b>2,195,525</b>	<b>5,061,444</b>	<b>65,904,750</b>	<b>64,150,436</b>	<b>11,478,976</b>
22,000-23,999 . . . . .	214,669	52,266	266,935	6,303,336	6,126,224	1,508,230
	<b>3,080,588</b>	<b>2,247,791</b>	<b>5,328,379</b>	<b>72,208,086</b>	<b>70,276,659</b>	<b>12,987,205</b>
24,000-25,999 . . . . .	168,020	32,674	200,694	5,150,747	5,007,442	1,307,257
	<b>3,248,608</b>	<b>2,280,465</b>	<b>5,529,073</b>	<b>77,358,833</b>	<b>75,284,102</b>	<b>14,294,462</b>
26,000-27,999 . . . . .	126,200	21,395	147,595	4,092,017	3,976,982	1,090,400
	<b>3,374,808</b>	<b>2,301,860</b>	<b>5,676,668</b>	<b>81,450,850</b>	<b>79,261,084</b>	<b>15,384,862</b>
28,000-29,999 . . . . .	92,770	13,630	106,400	3,169,586	3,078,935	880,156
	<b>3,467,578</b>	<b>2,315,490</b>	<b>5,783,068</b>	<b>84,620,436</b>	<b>82,340,019</b>	<b>16,265,018</b>
30,000-34,999 . . . . .	135,519	19,694	155,213	5,149,680	4,997,569	1,513,167
	<b>3,603,097</b>	<b>2,335,184</b>	<b>5,938,281</b>	<b>89,770,116</b>	<b>87,337,587</b>	<b>17,778,185</b>
35,000-39,999 . . . . .	65,070	13,048	78,118	2,980,081	2,892,454	948,950
	<b>3,668,167</b>	<b>2,348,232</b>	<b>6,016,399</b>	<b>92,750,198</b>	<b>90,230,042</b>	<b>18,727,136</b>
40,000-49,999 . . . . .	45,004	6,813	51,817	2,356,328	2,280,208	840,024
	<b>3,713,171</b>	<b>2,355,045</b>	<b>6,068,216</b>	<b>95,106,526</b>	<b>92,510,250</b>	<b>19,567,160</b>
50,000-99,999 . . . . .	27,227	5,210	32,437	2,117,802	2,046,951	895,217
	<b>3,740,398</b>	<b>2,360,255</b>	<b>6,100,653</b>	<b>97,224,328</b>	<b>94,557,201</b>	<b>20,462,377</b>
100,000 and over . . . . .	3,383	842	4,225	688,794	667,499	358,033
<b>Total</b> . . . . .	<b>3,743,781</b>	<b>2,361,097</b>	<b>6,104,878</b>	<b>97,913,122</b>	<b>95,224,701</b>	<b>20,820,410</b>

For footnotes see end of Table.

(a) Assessments in respect of 1982-83 income year issued during the period 1 July 1983 to 30 June 1984. (b) Net income is total assessable income less total deductions for expenses incurred in gaining assessable income. (c) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

The above table excludes details of assessments raised to trustees. However, the following table includes all 1982-83 income year assessments issued during the period 1 July 1983 to 30 June 1984.



## COMMONWEALTH INCOME TAX ASSESSMENTS: TAXABLE INDIVIDUALS BY STATE OR TERRITORY OF RESIDENCE

(Income derived in the year 1982-83)

State or Territory of Residence	Number of taxpayers	Taxable income(a)		Net tax
		\$'000	\$'000	
New South Wales . . . . .	2,135,078	33,923,315	7,570,779	
Victoria . . . . .	1,682,405	26,198,735	5,782,329	
Queensland . . . . .	905,141	13,604,001	2,894,573	
South Australia . . . . .	543,398	8,045,997	1,685,674	
Western Australia . . . . .	552,726	8,553,368	1,842,129	
Tasmania . . . . .	167,925	2,492,031	517,960	
Northern Territory(b) . . . . .	45,025	815,151	179,424	
Australian Capital Territory . . . . .	106,901	2,012,940	502,002	
<b>Australia . . . . .</b>	<b>6,138,599</b>	<b>95,645,536</b>	<b>20,974,870</b>	

(a) Taxable income on the income remaining deducting from assessable income all allowable deductions. (b) Assessments issued from South Australian Office.

**Partnerships and trusts**

Income tax returns are required to be lodged on behalf of partnerships and trusts which, as partnerships and trusts, are not required to pay tax except in certain specified circumstances when they may be assessed as individuals. In general, the net income remaining after allowing all deductions including expenditure incurred in gaining the income is distributed to the partners or beneficiaries concerned and is assessable for tax in the respective individual returns.

The following tables show for the 1981-82 and 1982-83 income years numbers, total business income and net income of partnerships and trusts. Greater detail is published in the statistical supplement to the annual report of the Commissioner of Taxation.

**PARTNERSHIPS AND TRUSTS—INCOME YEAR 1982-83(a)**

Item	Partnerships	Trusts	Total
Number . . . . .	456,824	258,846	715,670
Total business income . . . . . \$'000	19,797,726	13,238,706	33,036,432
Net income (b) . . . . . \$'000	4,391,697	2,681,603	7,073,301

(a) Assessments issued during the period 1 July 1982 to 30 September 1983. (b) Total net income adjusted by subtraction of loss.

**PARTNERSHIPS AND TRUSTS—INCOME YEAR 1981-82 (a)**

Item	Partnerships	Trusts	Total
Number . . . . .	558,879	275,148	834,027
Total business income . . . . . \$'000	25,045,883	12,758,340	37,804,223
Net income (b) . . . . . \$'000	6,020,863	3,036,853	9,057,716

(a) Assessments issued during the period 1 July 1983 to 30 September 1984. (b) Total net income adjusted by subtraction of loss.

**Taxes on income—companies**

For taxation purposes companies are divided into two main groups—public and private. A company is regarded as a public company if, broadly, its shares are on the official list of a stock exchange—in Australia or elsewhere and it is not capable of being controlled by relatively few individuals—or it is a co-operative, non-profit or mutual life insurance company or a Government body established for public purposes. A subsidiary of a public company is itself classed as a public company, subject to its meeting certain tests specified in the Income Tax Assessment Act. A company that is not a 'public' company is classified as a 'private' company. Both public and private companies pay primary tax assessed on a taxable income ascertained on the same principles as for individuals.

*Rates of tax.* The rates of primary income tax for all companies and additional tax for private companies applicable to income years 1970-71 to 1983-84 are shown in the following table.

## RATES OF INCOME TAX COMPANIES, 1970-71 TO 1983-84 INCOME YEARS

(Cents per \$)

Income years ended 30 June	Resident private company			Resident public company (a)		Non resident company			
				On taxable income		On dividends income		On other income	
	Up to \$10,000	On re- mainder	Additional tax on un- distributed income	Up to \$10,000	On re- mainder	Up to \$10,000	On re- mainder	Up to \$10,000	On re- mainder
1971 and 1972 . . . . .	37.5	42.5	50	47.5	47.5	42.5	47.5	47.5	47.5
1973 . . . . .	45.0	45.0	50	47.5	47.5	47.5	47.5	47.5	47.5
1974 . . . . .	45.0	45.0	50	45.0	45.0	45.0	45.0	45.0	45.0
1975 and 1976 . . . . .	42.5	42.5	50	42.5	42.5	42.5	42.5	42.5	42.5
1977 1984 . . . . .	46.0	46.0	50	46.0	46.0	46.0	46.0	46.0	46.0

(a) Excludes co-operative, non-profit and life insurance companies.

For the income year ended 30 June 1974 the rate for companies other than friendly society dispensaries was 45 per cent, except that for the first \$10,000 of taxable income of co-operative and non-profit companies (other than friendly society dispensaries) the rate was 42.5 per cent. The rate for friendly society dispensaries was 37.5 per cent.

For the income years ended 30 June 1975 and 1976 the rate for companies other than friendly society dispensaries was 42.5 per cent and for friendly society dispensaries it was 37.5 per cent. For the income years ended 30 June 1977 to 1982 the rates were 46 per cent and 41 per cent respectively. Commencing with incomes derived during the 1982-83 financial year, friendly society dispensaries are taxed in the same way as other non-profit companies.

A non-profit company is not liable to income tax unless the taxable income exceeds \$416. Where the taxable income of a non-profit company does not exceed \$2,542, the tax payable by the company is limited to 55 per cent of the amount by which the taxable income exceeds \$416 less any rebate or credit to which the company is entitled. Other companies are assessed for income tax if the taxable income is \$1 or more.

Non-resident companies are also liable to additional tax at the rate of 5 per cent of the company's reduced taxable income. Reduced taxable income means the amount remaining after deducting from taxable income net dividends included in assessable income and certain amounts relating to overseas ships, film royalties, insurance premiums and reinsurance income.

Details in respect of company income tax assessments for the 1981-82 income year are shown in the following table.

**COMMONWEALTH INCOME TAX ASSESSMENTS: RESIDENT AND NON-RESIDENT COMPANIES**  
**BY**  
**GRADE OF INCOME AND OFFICE OF ASSESSMENT**  
**(Income derived in the year 1981-82)**

Grades of taxable income(a) (\$) and office of assessment	Taxable			Non-taxable		
	Companies	Taxable income(a)	Net income tax assessed(b)	Companies	Taxable income (a) (c)	Loss(d)
Loss for year . . . . .	..	..	..	83,440	..	1,819,835
Nil . . . . .	..	..	..	57,432	..	..
1- 1,999 . . . . .	33,650	16,633	7,225	3,356	2,422	..
2,000- 9,999 . . . . .	18,115	93,273	38,806	4,026	21,108	..
10,000- 19,999 . . . . .	8,518	122,940	49,841	1,863	26,455	..
20,000- 39,999 . . . . .	7,337	208,591	84,110	1,333	37,728	..
40,000- 99,999 . . . . .	6,983	443,248	179,090	969	60,161	..
100,000- 199,999 . . . . .	3,353	471,340	193,927	320	44,074	..
200,000- 399,999 . . . . .	2,130	603,114	245,478	175	47,908	..
400,000- 999,999 . . . . .	1,639	1,020,814	399,665	102	62,222	..
1,000,000-1,999,999 . . . . .	777	1,101,697	407,215	44	60,844	..
2,000,000 and over . . . . .	940	9,183,404	3,062,226	52	305,977	..
<b>Total . . . . .</b>	<b>83,442</b>	<b>13,265,054</b>	<b>4,667,583</b>	<b>153,112</b>	<b>668,899</b>	<b>1,819,835</b>
New South Wales . . . . .	42,524	5,058,319	1,709,334	77,186	382,988	890,710
Victoria . . . . .	18,737	5,922,102	2,074,080	32,338	171,626	487,834
Queensland . . . . .	7,941	1,132,396	460,413	11,579	32,225	124,828
South Australia . . . . .	6,396	461,941	162,015	13,562	32,138	104,048
Western Australia . . . . .	4,542	516,111	206,349	10,930	31,512	140,479
Tasmania . . . . .	1,107	80,044	27,860	2,785	4,098	38,457
Northern Territory . . . . .	459	15,331	6,796	1,020	571	15,864
Australian Capital Territory . . . . .	1,736	78,809	20,736	3,712	13,741	17,576
<b>Total . . . . .</b>	<b>83,442</b>	<b>13,265,054</b>	<b>4,667,583</b>	<b>153,112</b>	<b>668,899</b>	<b>1,819,835</b>

(a) Taxable income is the income remaining after deducting from assessable income all allowable deductions. (b) Excludes additional tax on the undistributed income of private companies. (c) Net tax assessed is nil because of rebates. (d) Not included in the figures shown for taxable income.

### Yield of income taxes

*Income taxes collected.* The following table shows the net amounts of taxes collected and the proportions of the several components over recent years.

#### COMMONWEALTH INCOME TAXES COLLECTED: COLLECTION YEARS 1978-79 TO 1983-84

Source of income tax	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
NET AMOUNTS COLLECTED (\$'000)						
Individuals—						
Instalments—salaries and wages	10,397,606	12,160,308	14,120,691	17,417,317	18,840,314	19,940,085
Other payments . . . . .	2,406,212	2,879,787	3,422,561	3,806,998	4,126,459	4,521,096
Companies . . . . .	3,036,520	3,406,479	4,694,691	5,052,697	4,828,547	4,563,382
Withholding tax . . . . .	114,069	141,130	160,965	205,098	258,985	305,168
Prescribed payments system . . . . .	..	..	..	..	..	250,513
<b>Total . . . . .</b>	<b>15,954,407</b>	<b>18,587,704</b>	<b>22,398,908</b>	<b>26,482,110</b>	<b>28,054,305</b>	<b>29,580,245</b>
PERCENTAGES						
Individuals—						
Instalments—salaries and wages	65.17	65.42	63.04	65.77	67.16	67.41
Other payments . . . . .	15.08	15.49	15.28	14.38	14.71	15.28
Companies . . . . .	19.03	18.33	20.96	19.08	17.2	15.43
Withholding tax . . . . .	0.72	0.76	0.72	0.77	0.92	1.03
Prescribed payments system . . . . .	..	..	..	..	..	0.85
<b>Total . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

*Refunds of revenue.* Income tax collections, as previously shown are net amounts after refunds of revenue made in the course of the year. Refunds are of two types: those charged to special appropriations under authority of the Income Tax Assessment Act and those

charged to special appropriations under authority of the Audit Act. Income tax instalment refunds, by far the greatest part of income tax refunds, are made when the instalments deducted during the year exceed the tax assessed on incomes for that year. Refunds made from special appropriations under section 37A of the Audit Act include refunds of moneys paid to the revenue in error, refunds of tax overpaid, refunds due to the amendment of assessments, etc. Refunds of income tax to individuals and superannuation funds during the collection years 1978-79 to 1983-84 were: 1978-79, \$1,407,257,000; 1979-80, \$1,478,387,000; 1980-81, \$1,560,519,000; 1981-82, \$1,850,765,000; 1982-83, \$2,528,477,000 and 1983-84, \$2,997,005,000.

#### Estate duty

Prior to 1 July 1979 estate duty was levied under the *Estate Duty Assessment Act 1914* and was assessed on the net value of the estate less a statutory exemption. In respect of estates of persons who died after 21 November 1977 no duty was payable on that part of the estate which passed to or for the benefit of the deceased persons' widow or widower, children, grandchildren, parents or grandparents. Duty is not payable on estates of any person dying on or after 1 July 1979. For estates of persons who died before 1 July 1979, where no part of the estate passed to the relatives mentioned above, duty was payable on the net value less statutory exemption as follows:

-for qualifying estates of deceased primary producers—\$24,000

-for other estates—\$20,000

decreasing by \$2 for every \$8 by which the value of the estate exceeds \$24,000 or \$20,000 as the case may be.

Additional information concerning a rural property rebate and higher exemption levels for primary producers, special exemptions for defence personnel and a quick succession rebate is given in Year Book No. 63, page 534.

The rates of duty remained unchanged from 1941 and increased as the value of the estate for duty increased, as follows: not exceeding \$20,000, 3 per cent; \$20,001 to \$40,000, 3 per cent to 6 per cent; \$40,001 to \$240,000, 6 per cent to 26 per cent; \$240,001 to \$1,000,000, 26 per cent to 27.9 per cent; \$1,000,000 or more, 27.9 per cent.

Particulars of the number and value of dutiable estates and duty assessed for recent assessment years are given in the following table.

#### COMMONWEALTH ESTATE DUTY ASSESSMENTS

		1979-80	1980-81	1981-82	1982-83	1983-84
Estates . . . . .	No.	6,449	1,767	218	110	69
Gross value as assessed . . . . .	\$'000	n.a.	n.a.	n.a.	n.a.	n.a.
Deductions (a) . . . . .	"	n.a.	n.a.	n.a.	n.a.	n.a.
Statutory exemptions . . . . .	"	n.a.	n.a.	n.a.	n.a.	n.a.
Dutiable value . . . . .	"	n.a.	n.a.	n.a.	n.a.	n.a.
Net duty assessed . . . . .	"	41,434	10,434	1,984	1,907	593
Average dutiable value . . . . .	\$	n.a.	n.a.	n.a.	n.a.	n.a.
Average duty assessed per estate. . . . .	\$	6,425	5,905	9,100	17,336	8,594

(a) Debts, Exempt Estate and State Probate Succession Duties.

#### Gift duty

Prior to 1 July 1979 the *Gift Duty Act 1941* and the *Gift Duty Assessment Act 1941* imposed a gift duty on gifts which were defined as dispositions of property made otherwise than by will, without adequate consideration in money or money's worth. Both the donor and the donee were liable to furnish a return, and both were jointly and severally liable for payment of the duty. However, if a return was furnished by the donor, the donee is relieved of this obligation. Under the *Gift Duty Assessment Act 1978*, gifts to the donor's spouse, children, grandchildren, parents or grandparents made after 21 November 1977 were not subject to duty. Gift duty is not levied on any gifts made after 1 July 1979.

Certain exemptions from duty were provided, the more important being: payments to an employees' superannuation or like fund; retiring allowances or gratuities granted to employees; gifts to organisations not carried on for the profit of any individual; gifts to the Commonwealth Government or a State; and small gifts not exceeding \$100.

The rate of gift duty applicable to any particular gifts was fixed by reference to the total value of all gifts made by the same donor within the period of eighteen months before and eighteen months after the time of making that gift. Where the total value of all gifts as

defined did not exceed \$10,000 no duty was payable. The rates of duty that applied to 30 June 1979 were (a) \$10,001 to \$20,000, 3 per cent provided that the gift duty payable did not exceed one half of the amount by which the gift exceeded \$10,000 or a proportionate amount where more than one gift is involved; (b) \$20,001 to \$40,000, 3 per cent to 6 per cent; (c) \$40,001 to \$240,000, 6 per cent to 26 per cent; (d) \$240,001 to \$1,000,000 and over, 26 per cent to 27.9 per cent.

Particulars of the number of gift duty assessments, value of gifts as assessed and duty assessed for recent assessment years are given in the following table.

## COMMONWEALTH GIFT DUTY ASSESSMENTS

		1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
Assessments . . . . .	No.	995	875	233	27	108	415
Value as assessed . . . . .	\$'000	95,738	n.a.	n.a.	n.a.	n.a.	n.a.
Duty assessed . . . . .	"	22,032	4,985	311	150	452	2,144

## Customs duties

A description of the Australian Customs Tariff System is given in Chapter 24, Foreign Transactions. Details of duties collected on the import of commodities in accordance with the 'Brussels Nomenclature' are given in the following table.

GROSS CUSTOMS DUTIES ON IMPORTS ACCORDING TO BRUSSELS TARIFF DIVISIONS  
(\$'000)

<i>Brussels Tariff Division</i>		<i>Source of Receipts</i>	1982-83	1983-84	1984-85
1		Live animals; animal products . . . . .	1,409	1,708	1,492
2		Vegetable products . . . . .	3,092	5,603	4,984
3		Animal and vegetable fats and oils and their cleavage products; prepared edible fats; animal and vegetable waxes . . . . .	3,234	3,124	2,486
4		Prepared foodstuffs; beverages, spirits and vinegar; tobacco . . . . .	287,460	301,807	351,474
5		Mineral Products . . . . .	5,743	18,798	27,221
6		Products of the chemical industry and allied industries . . . . .	59,665	71,607	80,564
7		Artificial resins and plastic materials, cellulose esters and ethers, and articles thereof; rubber, synthetic rubbers, factice and articles thereof . . . . .	111,097	138,611	172,748
8		Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel goods, handbags and similar containers; articles of gut (other than silkworm gut) . . . . .	14,839	19,680	24,698
9		Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto and of other plaiting materials; basketware and wickerwork . . . . .	20,464	24,184	33,207
10		Paper-making material; paper and paperboard and articles thereof . . . . .	48,716	60,378	76,654
11		Textiles and textile articles . . . . .	236,610	271,460	331,717
12		Footwear, headgear, umbrellas, sunshades, whips, riding-crops and parts thereof; prepared feathers and articles made therewith; artificial flowers; articles of human hair; fans . . . . .	60,339	76,962	92,786
13		Articles of stone, of plaster, of cement, of asbestos, of mica and of similar materials; ceramic products; glass and glassware . . . . .	40,333	45,669	57,789
14		Pearls, precious and semi-precious stones, precious metals, rolled precious metals, and articles thereof; imitation jewellery; coin . . . . .	10,700	11,151	13,314
15		Base metals and articles of base metal . . . . .	119,385	120,495	154,620
16		Machinery and mechanical appliances; electrical equipment; parts therefor . . . . .	439,312	477,796	596,677
17		Vehicles, aircraft, and parts therefor; vessels and certain associated transport equipment . . . . .	465,701	571,183	771,855
18		Optical, photographic, cinematographic measuring, checking, precision, medical and surgical instruments and apparatus; clocks and watches, musical instruments; sound recorders and reproducers; television image and sound recorders and reproducers; magnetic; parts therefor . . . . .	62,613	75,662	79,494
19		Arms and ammunition; parts therefor . . . . .	675	736	1,103
20		Miscellaneous manufactured articles . . . . .	72,556	81,639	49,747
21		Works of art, collectors' pieces and antiques . . . . .	1,990	3,217	3,703
22		Primage . . . . .	90	1	—
<b>Total customs duties and primage . . . . .</b>			<b>2,066,023</b>	<b>2,381,468</b>	<b>2,978,333</b>

The *net* receipts of custom duties into consolidated revenue fund for these years are 1982-83, \$1,986,033,000; and 1983-84, \$2,298,768,000.

Customs duties on imports as recorded in the Financial Statements prepared by the Minister for Finance for these years are: 1982-83, \$2,035,662,743; 1983-84, \$2,328,996,429; and 1984-85, \$2,986,511,898.

### Excise duties

Details of duties collected in relation to the production of specific commodities are given in the following table:

COMMONWEALTH EXCISE REVENUE: CLASSIFICATION OF GROSS REVENUE  
(\$'000)

Source of revenue	1981-82	1982-83	1983-84	1984-85
Beer	1,005,866	1,090,761	1,155,200	1,177,461
Spirits, including liqueurs, etc.	119,606	112,649	116,335	122,712
Tobacco (manufactured), snuff	19,737	22,328	28,860	30,866
Cigars and cigarettes	706,883	773,711	829,541	862,638
Aviation gasoline—for use in aircraft	5,236	4,683	8,091	9,123
Aviation gasoline—other	—	873	—	—
Other gasoline	776,914	897,421	1,315,770	1,457,324
Aviation turbine kerosene	50,088	48,016	77,377	86,788
Kerosene, n.s.a. heating, fuel oil	84	52	33,106	36,184
Automotive, industrial and marine diesel fuel	130,747	412,650	691,022	775,138
Gasoline—commercial motor spirit/ethanol blends	21	1	—	—
Playing cards	86	n.p.	—	—
Cigarette tubes, paper and papers	695	n.p.	—	—
Matches	1,365	n.p.	—	—
Petroleum and liquid petroleum gas (excise item 17)	3,274,043	3,518,000	3,686,527	3,739,270
Coal	13,012	23,599	25,130	28,272
Other and undistributed excise revenue	85	1,861	349	4
<i>Total Gross Excise Duties</i>	<i>6,104,467</i>	<i>6,906,605</i>	<i>7,967,306</i>	<i>8,325,781</i>
<b>Total Gross Customs, Primage and Excise Duties</b>	<b>8,209,187</b>	<b>8,972,628</b>	<b>10,348,774</b>	<b>11,304,115</b>
Total Customs, Primage and Excise Refunds and Drawbacks	82,820	99,947	284,345	310,855

Statistics of the value of duty included in the price of petroleum products purchased by Commonwealth Government departments and subsequently credited to those departments by the Department of Finance are not available. The *net* receipts into consolidated revenue fund for these years are: \$6,100,476,000; 1981-82, \$6,886,648,000; and 1983-84, \$7,927,276,000. The quantities of commodities on which excise duty was paid are given in chapter 24, Foreign Transactions, page 615. Commonwealth excise received, as recorded in the Financial Statement prepared by the Minister for Finance during these years, are: 1982-83, \$6,806,654,140; 1983-84, \$7,733,367,606; and 1984-85, \$8,553,940,908.

### Sales tax

The *Sales Tax (Exemptions and Classifications) Act 1935* contains schedules specifying the classes of goods exempt from tax and those which are taxable at the rates of 10%, 20% and 30%. Goods not specified in any of the schedules are taxable at the general rate of 20%. Prior to 20 September 1985 the special rates were 7.5%, 10%, 20% and 32.5%.

Particulars of the sales of taxable goods in each rate class included in returns lodged at each office during the financial year 1982-83 are given in the following table.

**SALE VALUE OF TAXABLE GOODS INCLUDED IN RETURNS IN EACH RATE CLASS BY OFFICE  
1982-83**

Office	Gross sales of goods taxable at various rates				
	5%-7½%	17½%-20	30%-32½%	Other (a)	Total
	\$'000	\$'000	\$'000	\$'000	\$'000
Sydney . . . . .	975,330	3,810,500	910,698	300,591	5,997,119
Parramatta . . . . .	503,816	1,418,000	287,826	52,284	2,261,926
Melbourne . . . . .	1,354,506	4,409,206	418,451	202,588	6,384,750
Brisbane . . . . .	354,454	1,654,727	77,031	76,462	2,162,674
Perth . . . . .	180,040	844,998	42,274	53,490	1,120,801
Adelaide . . . . .	342,587	863,535	44,665	59,645	1,310,431
Hobart . . . . .	30,399	173,051	8,309	4,000	215,759
Northern Territory . . . . .	4,624	44,591	1,751	1,817	52,783
Canberra . . . . .	5,419	57,632	2,818	2,963	68,832
<b>Australia . . . . .</b>	<b>3,751,175</b>	<b>13,276,240</b>	<b>1,793,823</b>	<b>753,839</b>	<b>19,575,077</b>

(a) These amounts are inflated due to difficulties encountered in altering reporting procedures following changes in the rates of sales tax in 1982-83 Budget. A corresponding decrease is reflected in the amounts in each of the specific tax rates.

The following table summarises the principal sales tax statistics for each of the financial years 1973-74 to 1983-84.

**SALE VALUE OF TAXABLE GOODS INCLUDED IN SALES TAX RETURNS AND  
COLLECTIONS BY TAXATION OFFICE AND AUSTRALIAN CUSTOMS SERVICE**

Financial years 1974-75 to 1983-84

Financial year	Gross taxable sales	Net collections		Total
		Taxation Office	Australian Customs Service	
	\$'000	\$'000	\$'000	\$'000
1974-75 . . . . .	7,739,267†	1,103,329	50,961	1,154,290
1975-76 . . . . .	9,043,620†	1,359,744	48,562	1,408,306
1976-77 . . . . .	10,752,372†	1,588,898	61,420	1,650,318
1977-78 . . . . .	10,841,230†	1,694,823	62,940	1,757,763
1978-79 . . . . .	12,563,835†	1,698,859	71,033	1,769,892
1979-80 . . . . .	13,825,734†	1,786,808	78,033	1,864,841
1980-81 . . . . .	15,712,667	2,014,514	87,776	2,102,290
1981-82 . . . . .	18,297,050	2,730,965	123,301	2,854,266
1982-83 . . . . .	19,575,077	3,331,732	158,415	3,490,148
1983-84 . . . . .	22,680,569	3,974,810	189,948	4,164,758

† Estimated

Sales tax is payable on goods transferred to stock for sale by retail and goods used in the business of the taxpayer. Exempt sales relate to goods exempted from sales tax under the *Sales Tax (Exemptions and Classifications) Act 1935*. The figures shown do not represent the total sales of all commodities, as vendors trading only in exempt goods are not required to be registered and, consequently, the volume of their sales is not included. In addition, non-taxable sales (i.e. goods sold by one registered taxpayer to another registered taxpayer) are excluded.

**Primary production taxes and charges**

The following section shows rates of charges and levies on primary production as at 30 June 1985. Further information is given in Chapter 13, *Agricultural Industries*. Expenditure on research funded from industry levies is usually matched dollar for dollar by the Commonwealth Government.

*Export Inspection Charges.* A charge is imposed on products exported from Australia, or in certain cases for which an export permit has been issued. The Live-stock Slaughter—Export Inspection Charge is imposed on live-stock slaughtered at export works. The aim of imposing these charges is to recoup about half of the cost of providing export inspection services on the slaughter floor. The charges imposed are as follows:

<i>Class of live-stock</i>	<i>Rate of Charge per head</i>
	\$
Cattle where the dressed weight of each carcase exceeds 90 kilograms . . . . .	2.55
Cattle where the dressed weight of each carcase exceeds 40 kilograms but does not exceed 90 kilograms . . . . .	0.85
Cattle where the dressed weight of each carcase does not exceed 40 kilograms . . . . .	0.255
Sheep . . . . .	0.255
Goats . . . . .	0.255
Pigs . . . . .	0.85
Horses, donkeys and mules . . . . .	0.25

On 1 December 1984 the charges for inspection of export registered meat establishments was subdivided into 2 parts. The slaughter charge recoups part of the cost of inspection on the slaughter floor while the new Meat Export Charge recoups the cost of inspection of meat from slaughter to shipside. The rate of the Export Charge at 30 June 1985 was 2.4 cents per kilogram.

*Animal Export Inspection Charges.* Export inspection charges for live animals were introduced on 1 July 1983. Charges are made under the *Quarantine Act 1908* to recover a proportion of the cost to the Commonwealth of inspection of animals for export for which a certificate of health is issued. Charges, which vary according to the type of animal exported, made by Ministerial Determination under the *Quarantine Act 1908* and which are published in the Commonwealth Gazette.

*Dairy Products—Export Inspection Charge.* Under the *Dairy Products (Export Inspection Charge) Act 1982*. The rates are:

<i>Category</i>	<i>Rate per tonne</i>
	\$
Butter packed in bulk or pat form . . . . .	1.16
Butter packed otherwise than in bulk or pat form . . . . .	1.16
Butterfat products other than butter . . . . .	1.64
Cheese packed in bulk . . . . .	2.57
Cheese packed otherwise than in bulk . . . . .	2.57
Concentrated, condensed and dried milk . . . . .	1.97
All other dairy products . . . . .	1.97

*Dried Fruit—Export Inspection Charge.* Under the *Dried Fruit (Export Inspection Charge) Act 1981*, a charge is imposed on all dried fruit exported from Australia to recoup about half the cost of export inspection incurred by the Commonwealth Government. The operative charge is \$4.80 per tonne.

*Eggs—Export Inspection Charge.* Imposed under the *Eggs (Export Inspection Charge) Act 1982*. The rates are \$10.00 per 1,000 dozen eggs in shell and \$16.00 per tonne of eggs other than in shell.

*Fish—Export Inspection Charge.* Under the *Fish (Export Inspection Charge) Act 1981*, a charge is imposed on fish for which an export permit has been issued. The charges are:

- Rock lobster—4.7 cents per kilogram
- All other shellfish except oysters, squid, cuttlefish and octopus—5.1 cents per kilogram
- All other fish except oysters in the shell or half shell—1.2 cents per kilogram
- Oysters in the shell or half shell—13 cents per dozen
- Oysters not in shell—4.4 cents per kilogram
- Squid, cuttlefish and octopus—3.6 cents per kilogram.

*Grain Export Inspection Charge.* Under the *Grain (Export Inspection Charge) Act 1979* imposed on exports of wheat, oats, barley and sorghum. The charge is 9.7c per tonne on bulk grain, 21.0c per tonne bagged grain and 72c per tonne for grain in containers.

#### **Other charges**

*Export Inspection—Overtime Recoveries—Meat.* Under the *Export Control Act 1982*, a charge at the rate prescribed in the Meat Orders is imposed on export meat-works to recover fully the cost of providing export meat inspection services outside normal hours.

*Export Inspection Charge—Overtime Recoveries—Products Other than Meat.* Fees are levied to recover the cost of providing export inspection, outside normal hours, for a number



of products including field and horticultural crops, fish and dairy products. The fees are prescribed by the Export Control (General) Regulations made under the *Export Control Act 1982*.

*Fishing Licences and Charges.* Under the *Fisheries Act 1952* the *Continental Shelf (Living Natural Resources) Act 1968* and the *Torres Strait Fisheries Act 1984*, domestic and foreign boats and masters of boats may be licensed to fish in the Australian Fishing Zone. Other charges such as access fees for foreign countries are also levied under the *Foreign Fishing Boats Levy Act 1981* and the *Fisheries Agreements (Payments) Act 1981*. The rate of licence fees is set out in the Fisheries Regulations, the Continental Shelf (Living Natural Resources) Regulations and the Torres Strait Fisheries Regulations.

*Export Inspection Charges—Miscellaneous.* By arrangement, Commonwealth inspectors are provided to (i) abattoirs that are not registered export establishments to inspect meat for domestic consumption, (ii) State Dried Fruit Boards to inspect dried fruit for domestic use, and to (iii) Australian Wheat Board for the issue of quality certificates.

The inspection charge in those cases is arrived at by agreement between the parties concerned.

*Wool Inspection Fees.* Under the *Wool Industry Act 1972*, fees are imposed on the inspection of wool to recoup about half the cost of operating the Australian Wool Measurement Standards Authority. A fee for registering a wool sampling site is set at \$100 and is payable once only. The fee at registered sites is currently 55 cents per lot of wool sampled.

#### **Research, Promotion, Stabilisation and Equalisation Levies and Charges**

*Apple and Pear Levy.* The *Apple and Pear Levy Act 1976* imposes a levy on the production and sale of apples and pears in Australia excluding fruit sent for export and pears used in the production of dried fruit or delivered for the manufacture of canned fruit. The rates of the levy are: fresh market 11 cents per box; juicing \$1.10 per tonne; processing \$2.20 per tonne.

The *Apple and Pear Export Charge Act 1976* provides for the imposition of a charge on apples and pears exported from Australia. The rate of charge is 11 cents per box.

Monies collected from both the levy and the export charge are used to fund the operations of the Australian Apple and Pear Corporation.

*Barley Research Levy.* The *Barley Research Levy Act 1980* imposes a levy on barley delivered for sale. The levy is disbursed for research by State barley research committees. The operative rate of levy is 30 cents per tonne. The Government is currently considering a proposal to increase the rate of levy to 35 cents per tonne.

*Canned Fruits Levy.* The *Canned Fruits Levy Act 1979* imposes a levy on the production of canned fruits in Australia.

The operative rates are:

Containers not exceeding 150 grams—1.375 cents/doz. containers.

Containers exceeding 150 grams but not exceeding 320 grams—2.75 cents/doz. containers.

Containers exceeding 320 grams but not exceeding 490 grams—5.5 cents/doz. containers.

Containers exceeding 490 grams but not exceeding 680 grams—8.25 cents/doz. containers.

Containers exceeding 680 grams—11.0 cents/doz. containers plus 6.6 cents/doz. containers for each 450 grams by which the gross weight of the container exceeds 900 grams.

The funds raised are used to finance the operation of the Australian Canned Fruits Corporation.

*Cotton Research Levy.* Under the *Cotton Levy Act 1982* a levy is imposed on the production of cotton. The levy is used to fund research programs. The operative rate of levy is to be \$1 per 225 kg of raw cotton.

*Wool Tax.* The *Wool Tax Acts (Nos 1-5) 1964* as amended impose a tax of 8 per cent on the sale value of all shorn wool produced in Australia.

The *Wool Industry Act 1972* provides for Regulations to be made, after consideration of recommendations by the Wool Council of Australia, apportioning the wool tax receipts among market support, wool promotion and market administration expenses, and research, subject to the market support allocation being between 4% and 5% of the sale value of the shorn wool. In 1985-86 the apportionment is 5% to market support, 2.5% to wool promotion and market administration expenses and 0.5% to research.

*Dairy Industry Stabilisation Levy.* The *Dairy Stabilisation Levy Act 1977* imposes a levy on the production of butter, butteroil, ghee, various milk powders, casein, caseinates and certain varieties of cheese. The levy is not collected on production which is exported. Levies collected on production which is sold on the domestic market are distributed (after deduction

of certain costs) by the Australian Dairy Corporation as an equalisation payment on all sales of the product, whether on the domestic or export market. The rate of levy is fixed at the difference between the domestic value for levy purposes determined by the Minister for Primary Industry from time to time and the assessed average export price for the period. The purpose of the levy is to distribute assistance raised through the levy on domestic sales across all production and has the effect of providing producers with an averaged return that is above export parity.

*Dairying Research and Promotion Levy.* The *Dairying Industry Research and Promotion Levy Act 1972* provides for the imposition of a levy on all milk produced and sold in Australia with the levy payable by dairy farmers, either on a whole milk or butterfat basis. The levy imposed is made up of three components; one to finance the administration and overseas sales promotion activities of the Australia Dairy Corporation (ADC), one to finance the domestic promotion activities of the ADC and one as the industry's contribution to the research programme expenditure recommended by the Australian Dairying Research Committee. The *Dairying Industry Research and Promotion Levy Regulations* prescribe levies of either 24 cents per 100 litres of whole milk or 600 cents per 100 kilograms of butterfat.

*Dried Fruits Levy.* The *Dried Fruits Levy Act 1971* imposes a levy on dried fruits of a season received for packing in order to fund industry research programmes. The operative rates of levy are for dried vine fruits \$1.50 per tonne, dried plums \$7.80 per tonne and dried tree fruit other than dried plums \$5.00 per tonne.

*Dried Fruits Export Charges.* The *Dried Fruits Export Charges Act 1924* imposes a levy of \$10.00 per tonne on the export of dried currants, sultanas and raisins. The funds are used to finance the Australian Dried Fruits Corporation.

*Dried Vine Fruits Equalisation Levy.* The *Dried Vine Fruits Equalisation Levy Act 1978* imposes a levy on domestic sales of dried vine fruit which is related to the difference between the assessed returns per tonne from the domestic market and the assessed average returns per tonne from export. The purpose of the levy is to facilitate the equalisation of returns to producers from all markets. The 1985 season levy rates were set at \$866 per tonne and \$530 per tonne for currants and sultanas respectively. Raisins were exempted from levy for the 1985 season due to the sub-minimum production level. From the commencement of the 1986 season, equalisation assistance will be reduced uniformly for each variety so that equalised returns in 1990 will be no more than 15 per cent above average export returns. Accordingly, the rates of levy for the 1986 season (where applicable) are to be set at levels not expected to exceed 40.4 per cent, 32.4 per cent and 79.4 per cent of the average export returns for currants, sultanas and raisins respectively.

*Honey Export Charge.* The *Honey Export Charge Act 1973* imposes a charge of 0.75 cent per kilogram on honey exports.

The funds are used to finance the operations of the Australian Honey Board and provide the industry's contribution to research.

*Honey Levy.* The *Honey Levy Acts (Nos 1 & 2) 1962* impose a levy of 2.45 cents per kilogram on honey sold for domestic consumption.

*Livestock Export Charge.* The *Livestock Export Charge Act 1977* imposes charges which apply to all cattle, buffaloes, sheep, lambs and goats exported live from Australia. The funds are allocated to the Australian Meat and Livestock Corporation (AMLC), the Australian Meat and Livestock Research and Development Corporation (AMLRDC) and for disease eradication.

The charges are:

	Cents/Head			Total
	AMLC	AMLRDC	Disease eradication	
Cattle, buffaloes . . . . .	230	50	400	680
Sheep and lambs . . . . .	16.8	5	—	21.8
Goats . . . . .	16.2	5	—	21.2

*Livestock Slaughter Levy.* The *Livestock Slaughter Levy Act 1961* imposes a levy which is payable on cattle, calves, bobby calves, sheep, lambs, goats and buffaloes slaughtered for human consumption. The funds are used by the Australian Meat and Livestock Corporation (AMLC) for marketing and promotion and by the Australian Meat and Livestock Research

and Development Corporation (AMLRDC) for production and economic research and for meat processing research. The Slaughter Levy also provides the funds for the eradication of brucellosis and tuberculosis in cattle and buffaloes.

The levies are:

	Cents/Head			Total
	AMLC	AMLRDC	Disease eradication	
Cattle, buffaloes . . . . .	230	54	400	684
Calves . . . . .	82.8	14.4	133	230.2
Bobby calves . . . . .	23	3.9	40	66.9
Sheep . . . . .	18.8	5.4	—	24.2
Lambs . . . . .	28.8	5.4	—	34.2
Goats . . . . .	16.2	5.4	—	21.6

*Wheat (Research) Tax.* The Wheat Tax Acts 1957 and 1979 impose a tax, currently 30c/tonne, on all wheat delivered to or sold by the Australian Wheat Board. The funds are placed in the Wheat Research Trust Account and used to fund research projects relating to wheat as recommended by the State Wheat Industry Research Committees. The Government is currently considering a proposal to increase the rate of tax to 35 cents per tonne.

*Poultry Industry Levy.* The *Poultry Industry Levy Act 1965* imposes a levy of 7.5 cents per hen in respect of hens kept for commercial purposes.

*Hen Levy.* The *Poultry Industry Levy Act 1965* imposes a levy in respect of hens in excess of twenty kept for commercial purposes and which are not less than six months of age. The operative rate of levy is 5 cents per hen per fortnight and proceeds are used to provide funds for the assistance of the industry and the industry contribution to a poultry research program.

*Pig Slaughter Levy.* The *Pig Slaughter Levy Act 1971*, as amended, provides for a levy to be imposed on each pig slaughtered for human consumption for the purposes of promotion and industry contribution to a pig research program.

The operative rate of levy is 95c per pig slaughtered which is divided 80c for promotion and 15c for research.

*Meat Chicken Levy.* The *Meat Chicken Levy Act 1969* imposes a levy on meat chickens hatched. The operative rate of levy is 0.1 cents per chicken and the proceeds are used to provide the industry contribution to a research program.

*Wine Grapes Levy.* The *Wine Grapes Levy Act 1979* imposes a levy on fresh grapes crushed or juice used in the production of wine. The operative rate is \$2.40 per tonne. The funds raised are used to fund the operation of the Australian Wine and Brandy Corporation.

*Oil Seeds Levy.* The *Oil Seeds Levy Act 1977* imposes a levy of \$1.00 per tonne on certain oilseeds produced in Australia. The funds provide the industry's contribution to research.

### Pay-roll tax

Commonwealth pay-roll tax came into operation on 2 May 1941 and provided for the imposition of a tax on wages paid or payable in respect of any period of time occurring after 20 June 1941. The tax was payable by employers on all wages and salaries paid or payable in excess of a general exemption. The rate of tax, 2.5 per cent, was not changed after its inception, but the general exemption was increased over the years from \$173.33 to \$1,733.33 per month (\$2,080 per annum to \$20,800 per annum).

From 1 September 1971, in accordance with an agreement between the Commonwealth Government and the States following the June 1971 Premiers' Conference, the Commonwealth Government vacated the pay-roll tax field in favour of the States. It continued, however, to impose pay-roll tax in the Australian Capital Territory and the Northern Territory. The laws relating to pay-roll tax in the Territories are the *Pay-roll Tax (Territories) Assessment Act 1971* and the *Pay-roll Tax (Territories) Act 1971*.

Commonwealth pay-roll tax in the Northern Territory was terminated from 1 July 1978 by the *Pay-Roll Tax (Territories) Assessment Act (No. 2) 1978* giving the Territory the right to levy its own pay-roll tax.

From 1 January 1985 the rate of tax payable in the Australian Capital Territory is 5 per cent with a statutory exemption of wages up to \$14,166.67 per month (\$170,000 per annum)

or a proportion of that amount in the case of an employer who is an employer also in a State. Phasing out of the exemption remains at \$2 for each \$3 by which the annual wages payable exceed the maximum exemption level.

Gross collection of pay-roll tax in 1980-81, 1981-82, 1982-83, 1983-84 amounted to \$17,007,851, \$19,319,922, \$21,355,311 and \$23,822,507 respectively.

## STATE GOVERNMENTS

The State government enterprises dealt with in this section include the central government of each State, statutory bodies created by or under State legislation to carry out activities on behalf of the central government, and incorporated organisations in which individual State governments have a controlling interest.

The transactions of many of the State government enterprises are itemised in State Consolidated Revenue Funds or in Trust Funds, so that a satisfactory coverage of their transactions can be obtained from a detailed analysis and reclassification of the published accounts whose receipts and payments are summarised in the Statement of Treasury balances for each State. The remaining statutory bodies and other publicly owned or controlled organisations maintain accounts entirely, or largely, separate from the public accounts, although there may be transactions between them and State governments (such as advances and capital contributions, interest and dividends, and votes for running expenses and capital works) which would affect the public accounts. The accounting reports of this group of organisations have to be collected and analysed in order to present a complete statement of the transactions of State government enterprises—or at least methods of analysis need to be adopted which adequately reflect their transactions so that they are in principal, covered by the statistics.

In the figures which follow in this section, all expenditure by State central government enterprises on certain institutions, whether direct (e.g. new building charged to Loan Fund) or indirect by way of current or capital grants to the bodies administering them, has been treated as final expenditure on goods and services by State government; fees and gifts from persons or private businesses to these institutions are not included, nor is the expenditure of the institutions from their own resources. Universities and hospitals are particular examples of organisations for which this practice has been adopted.

Many of these State government enterprises have been granted autonomy by State legislatures to the extent that they are largely financially independent. Some of these are funded from earmarked tax revenues and are vested with independent borrowing powers. A considerable number of others belong to the category of public trading enterprises, since they are able to charge for their services so as to cover their costs of operation. These bodies have usually been created to control a specific activity or provide a specific service within a State. It is often the case that in other States similar activities are carried out, or services are provided, by central government or local governments. Details of the activities of autonomous or semi-autonomous State government enterprises engaged in such fields as construction and maintenance of roads and bridges, provision of water supply and sewerage services, harbour facilities, transport, electricity and gas, housing and banking may be found in chapters relevant to those subjects and in State Year Books.

Details of the transactions of State governments are given in the tables which follow and in *State and Local Government Finance, Australia* (5504.0). Additional information relating to the activities of the State governments may also be found in the Year Books of the individual States.

### Coverage—Northern Territory government

On 1 July 1978 the Northern Territory became self-governing with expenditure responsibilities and revenue raising powers broadly approximately those of a State. In the period up to and including 1977-78 outlays and revenue relating to the Northern Territory government are included with those for the Commonwealth government but from 1978-79 onwards they have been grouped with the outlays and revenue of State governments.

**Outlay, revenue, grants received, and deficit**

The outlay, revenue, grants received and deficit of State governments for the six year period ended 1983-84 are given in the following table.

**OUTLAYS, REVENUE AND GRANTS RECEIVED, AND DEFICIT OF STATE GOVERNMENTS**  
(\$ million)

	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
Current outlays . . . . .	13,924	15,711	18,364	21,148	24,637	27,366
General government final consumption expenditure . . . . .	9,944	11,277	13,074	14,872	16,851	18,566
Required current transfer payments . . . . .	1,997	2,257	2,712	3,241	3,992	4,550
Unrequired current transfer payments . . . . .	1,982	2,177	2,577	3,034	3,794	4,251
Subsidies paid to enterprises . . . . .	824	842	995	1,227	1,608	1,663
Personal benefit payments . . . . .	278	297	283	307	449	471
Current grants . . . . .	871	1,027	1,285	1,486	1,720	2,096
to non-profit institutions . . . . .	595	702	869	1,026	1,170	1,375
to Local governments . . . . .	275	325	416	461	550	721
Other current transfer payments . . . . .	10	12	14	13	17	20
Capital outlays . . . . .	5,799	6,140	7,086	7,475	9,803	10,657
Gross fixed capital expenditure . . . . .	5,125	5,496	6,347	6,709	8,608	9,371
Expenditure on new fixed assets . . . . .	5,169	5,572	6,380	7,717	9,338	10,499
Expenditure on second hand fixed assets (net) . . . . .	-44	-76	-33	-1,009	-730	-1,129
Increase in stocks . . . . .	36	64	110	130	178	42
Expenditure on Land and intangible assets (net) . . . . .	58	40	43	36	68	121
Capital transfer payments . . . . .	333	349	356	406	430	569
Capital grants . . . . .	333	349	356	406	429	569
to Local governments . . . . .	260	285	289	317	320	448
to other sectors . . . . .	73	64	67	89	109	120
Other capital transfer payments . . . . .	—	—	—	—	—	—
Advances paid (net) . . . . .	247	191	230	193	519	556
to Local governments . . . . .	15	12	17	21	16	16
to other sectors . . . . .	231	179	213	173	503	541
Revenue and grants received . . . . .	16,728	18,755	21,321	24,141	28,286	32,153
Taxes, fees and fines . . . . .	4,935	5,559	6,385	7,533	8,767	9,704
Net operating surpluses of public trading enterprises . . . . .	1,111	1,284	1,463	1,693	2,263	2,606
Property income and other revenue . . . . .	1,060	1,265	1,514	1,761	1,941	2,142
Grants received from Commonwealth government . . . . .	9,622	10,647	11,959	13,153	15,316	17,702
Financing transactions . . . . .	2,995	3,096	4,128	4,481	6,154	5,871
Increase in provisions . . . . .	561	604	721	879	1,069	1,326
<b>Deficit . . . . .</b>	<b>2,434</b>	<b>2,492</b>	<b>3,407</b>	<b>3,603</b>	<b>5,085</b>	<b>4,545</b>
Deficit financing						
Net advances received from Commonwealth Government (ETF 41) . . . . .	1,127	896	938	866	1,058	999
Other deficit financing . . . . .	1,307	1,596	2,469	2,737	4,027	3,546

For more recent information on State Government finance statistics, reference should be made to the publications listed in the bibliography at the end of this chapter.

## LOCAL GOVERNMENTS

In each State of Australia and in the Northern Territory there exists a system of local government whose powers and responsibilities are generally similar and cover such matters as the construction and maintenance of roads, streets and bridges; water, sewerage and drainage systems; health and sanitary services; the supervision of building; and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions, there are also many which may be performed by a local authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, swimming pools, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local government bodies, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers. While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc. vary considerably from State to State, and even within States.

The areas over which local government bodies, numbering almost 900, exercise general control, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; South Australia as cities, corporate towns and district council areas; in Western Australia as cities, towns and shires and in Tasmania and the Northern Territory as cities and municipalities. In New South Wales some local authorities in an area have combined to form County Councils which provide services such as electricity and water supply. Within shires there are also some municipal units known as urban areas. Apart from the Australian Capital Territory and the more sparsely populated parts of New South Wales, South Australia and the Northern Territory, practically the whole of Australia comes within local government jurisdiction. For further details see State Year Books.

### **Coverage—Northern Territory local governments**

On 1 July 1978, the Northern Territory became self-governing with expenditure responsibilities and revenue raising powers broadly approximating those of a State. In the period up to and including 1977-78 outlays and revenue relating to the Northern Territory are included with that for the Commonwealth Government but from 1978-79 onwards they have been grouped with the outlays and revenue of State and local governments.

### **Area, population, dwellings, and rates and penalties for ordinary services**

The area, population, dwellings, and the amount of rates and penalties collected for ordinary services in the incorporated areas of each State are shown in the following table. Particulars of dwellings are in accordance with the definition used in the Census, and are compiled from information collected on the Census Schedules. In the table, where the boundary of a capital city statistical division cuts across a local government area, the area of that capital city statistical division has been estimated. Particulars of population for capital city statistical divisions take account of those local government areas which overlap with capital city statistical division boundaries.

The item 'Rates and Penalties for Ordinary Services' relates to general and other special or local rates (excluding water and sewerage rates) levied or declared or, where the cash accounting system operates, the rates collected.

**LOCAL GOVERNMENT: AREA, POPULATION, DWELLINGS, AND RATES AND PENALTIES FOR ORDINARY SERVICES—30 JUNE 1983**

Location (a)	No. of local authorities	Area(a) square kilometres	Population '000	Dwellings(b) '000	Rates and penalties—ordinary services
					\$'000
<b>New South Wales(c)—</b>					
Sydney Statistical Division . . . . .	43	12,407	3,335	1,150	494,808
Other . . . . .	132	693,255	2,024	672	306,532
<b>Total New South Wales</b>	<b>175</b>	<b>705,662</b>	<b>5,359</b>	<b>1,822</b>	<b>801,340</b>
<b>Victoria(d)—</b>					
Melbourne Statistical Division(e) . . . . .	56	7,799(e)	2,884	965	424,775
Other . . . . .	155	219,301	1,151	403	170,338
<b>Total Victoria</b>	<b>211</b>	<b>227,100</b>	<b>4,035</b>	<b>1,368</b>	<b>595,113</b>
<b>Queensland—</b>					
Brisbane Statistical Division(f) . . . . .	10	3,080	1,138	359	140,674
Other . . . . .	124	1,723,920	1,333	428	161,480
<b>Total Queensland</b>	<b>134</b>	<b>1,727,000</b>	<b>2,472</b>	<b>787</b>	<b>302,154</b>
<b>South Australia—</b>					
Adelaide Statistical Division(g) . . . . .	30	2,290	971	340	106,575
Other . . . . .	98	151,386	358	132	44,348
<b>Total South Australia</b>	<b>128</b>	<b>153,676</b>	<b>1,329</b>	<b>471</b>	<b>150,923</b>
<b>Western Australia—</b>					
Perth Statistical Division . . . . .	26	5,363(h)	969	322	103,582
Other . . . . .	113	2,520,137(h)	395	126	49,731
<b>Total Western Australia</b>	<b>139</b>	<b>2,525,500(h)</b>	<b>1,364</b>	<b>448</b>	<b>153,313</b>
<b>Tasmania—</b>					
Hobart Statistical Division(i) . . . . .	7	3,345	180	61	19,803
Other . . . . .	42	64,988	252	93	28,753
<b>Total Tasmania</b>	<b>49</b>	<b>68,333</b>	<b>432</b>	<b>154</b>	<b>48,556</b>
<b>Northern Territory—</b>					
Darwin Statistical Division . . . . .	1	114	60	18	7,100
Other . . . . .	3	209	27	14	2,794
<b>Total Northern Territory</b>	<b>4</b>	<b>323</b>	<b>87</b>	<b>32</b>	<b>9,894</b>

(a) Unincorporated areas are excluded in all states. (b) Figures are at 30 June 1981 (census data). (c) Based on year ended 31 December 1983. (d) Based on year ended 30 September 1983. (e) Includes all of Cranbourne(S), Healesville(S) and Pakenham(S) even though parts are outside the Melbourne Statistical Division. (f) Includes the Moreton Statistical Division component for five local authorities. (g) Excludes Light(DC), Gumeracha(DC) and Onkaparinga(DC) but includes the parts of Meadows(DC) and Willunga(DC) which are in the Outer Adelaide Statistical Division. (h) Figures are at 30 June 1981 (i) Includes all of Brighton(M), Kingsborough(M), New Norfolk(M) and Sorell(M) even though parts are outside the Hobart Statistical Division.

**OUTLAYS, REVENUE AND GRANTS RECEIVED AND DEFICIT OF LOCAL GOVERNMENTS**

(\$ million)

	1978-79	1979-80	1980-81	1981-82	1982-83p	1983-84p
<b>Current outlays</b>	1,140	1,318	1,521	1,770	2,162	2,472
General government final consumption expenditure	801	928	1,070	1,234	1,484	1,712
Required current transfer payments	294	322	368	442	558	623
Unrequired current transfer payments	45	68	82	95	120	137
<b>Capital outlays</b>	1,428	1,543	1,711	1,977	2,079	2,366
Gross fixed capital expenditure	1,403	1,515	1,693	1,945	2,060	2,328
Expenditure on new fixed assets	1,404	1,522	1,720	1,946	2,112	2,384
Expenditure on secondhand fixed assets (net)	-1	-7	-27	-1	-52	-56
Increase in stocks	7	10	18	20	16	18
Expenditure on land and intangible assets (net)	-4	-2	-14	-5	16	18
Capital transfer payments	7	11	9	11	-5	8
Advances paid (net)	15	9	4	6	-8	-6
<b>Revenue and grants received</b>	2,233	2,481	2,838	3,269	3,765	4,348
Taxes, fees and fines	1,264	1,399	1,595	1,817	2,079	2,282
Net operating surpluses of public trading enterprises	202	228	246	291	306	342
Property income and other revenue	215	227	269	357	467	502
Grants received	552	626	727	804	914	1,222
from Commonwealth Government	17	16	22	27	44	53
from State governments	535	610	705	777	870	1,169
Financing transactions	335	380	394	478	476	490
Increase in provisions	49	67	155	234	224	241
<b>Deficit</b>	<b>286</b>	<b>313</b>	<b>239</b>	<b>244</b>	<b>252</b>	<b>249</b>
<b>Deficit financing</b>						
Net advances received from Commonwealth and State governments	15	12	17	21	16	16
Other deficit financing	271	301	222	223	236	233

For more recent information on local government finance statistics, reference should be made to the publications and statistical services listed in the bibliography at the end of this chapter.

## ALL LEVELS OF GOVERNMENT

In the following table the transactions of the Commonwealth Government, State and local governments have been brought together and consolidated to provide details of the outlays and revenue of the public non-financial sector as a whole.

### Summary of outlays, revenue and deficit

The outlays, revenue and deficit all governments for the years 1978-79 to 1983-84 are set out in the following table.

**OUTLAYS, REVENUE AND DEFICIT OF COMMONWEALTH, STATE AND LOCAL GOVERNMENTS<sup>(a)</sup>**  
(\$ million)

	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84 <sup>p</sup>
Current outlay . . . . .	31,560	35,313	40,978	47,551	56,074	64,344
General government final consumption expenditure . . . . .	16,340	18,463	21,508	24,770	28,328	31,804
Required current transfer payments . . . . .	3,084	3,544	4,241	5,049	6,273	7,690
Unrequited current transfer payments . . . . .	12,136	13,306	15,230	17,732	21,473	24,850
Subsidies paid to enterprises . . . . .	1,497	1,688	2,039	2,390	2,871	3,163
Personal benefit payments . . . . .	9,388	10,202	11,520	13,401	16,401	19,185
Current grants . . . . .	1,240	1,404	1,656	1,929	2,184	2,481
to non-profit institutions . . . . .	766	884	1,081	1,261	1,452	1,714
to foreign governments and organisations . . . . .	475	520	575	668	732	767
Other current transfer payments . . . . .	10	12	14	13	17	20
Capital outlays . . . . .	8,136	8,873	10,059	11,396	14,251	15,506
Gross fixed capital expenditure . . . . .	7,794	8,402	9,511	10,463	12,822	13,967
Expenditure on new fixed assets . . . . .	7,928	8,525	9,858	11,763	13,714	15,178
Expenditure on secondhand fixed assets (net) . . . . .	-134	-123	-347	-1,300	-892	-1,211
Increase in stocks . . . . .	-166	9	204	331	434	216
Expenditure on land and intangible assets (net) . . . . .	40	38	-114	17	49	78
Capital transfer payments . . . . .	205	231	205	316	383	496
Capital grants . . . . .	205	231	205	316	383	488
to non-profit institutions . . . . .	72	65	62	87	83	84
to other sectors . . . . .	133	166	142	229	300	404
Other capital transfer payments . . . . .	—	—	—	—	—	7
Advances paid (net) . . . . .	263	193	253	269	563	749
Revenue . . . . .	33,390	38,619	45,395	52,972	58,712	65,021
Taxes, fees and fines . . . . .	29,620	34,472	40,656	47,282	51,849	56,731
Net operating surpluses of public trading enterprises . . . . .	2,038	2,228	2,485	2,916	3,483	4,512
Property income and other revenue . . . . .	1,732	1,919	2,254	2,774	3,380	3,777
Financing transactions . . . . .	6,305	5,568	5,642	5,975	11,613	14,828
Increase in provisions . . . . .	1,155	1,283	1,550	1,850	2,126	2,429
<b>Deficit . . . . .</b>	<b>5,150</b>	<b>4,285</b>	<b>4,092</b>	<b>4,125</b>	<b>9,487</b>	<b>12,399</b>

(a) Excludes financial enterprises.



## PUBLIC SECTOR BORROWING

Figures given in this section do not purport to show either 'public debt' or 'net public debt', but are designed to provide details of securities issued on behalf of the Commonwealth Government and the States, together with some details of the amounts borrowed by State and local governments with independent borrowing powers.

For a number of reasons, this information cannot be aggregated, without adjustment, to provide a measure of the 'debt' of public sector enterprises. There are forms of debt not evidenced by the issue of securities, such as Commonwealth Government advances to the States for specific capital purposes. Governments themselves maintain significant holdings of their own securities; for example, the Commonwealth Government, in the National Debt Sinking Fund, the Loan Consolidation and Investment Reserve, and in other Trust Funds, holds large investments in securities issued either directly by itself or on behalf of the States. Some of the securities issued on behalf of the States and held by the Commonwealth Government represent the proceeds of overseas loans, securities for which were issued directly by the Commonwealth Government, the Australian currency counterpart proceeds of the loans being invested in special loans to finance State works programs. A number of State public corporations and local governments also maintain significant investments in government securities (including their own securities). Aggregation of the figures for securities on issue which follow would clearly involve a substantial degree of duplication; the sum of securities on issue therefore cannot be regarded as representing 'net public debt'.

### Commonwealth Government and States: Government securities on issue

Under the 1927 Financial Agreement between the Commonwealth Government and the States, the Commonwealth Government accepted responsibility for the securities of State governments then on issue and was empowered to arrange for all future borrowings on behalf of the Commonwealth and the States and to issue Commonwealth Government securities for all moneys borrowed.

A National Debt Sinking Fund, which is administered by the National Debt Commission, was established by the *National Debt Sinking Fund Act 1923* for the redemption of securities issued on behalf of the Commonwealth Government. Under the terms of the Financial Agreement, the sinking funds existing in respect of the States' debts were also placed under the control of the Commission. The Commonwealth Government is reimbursed by the States for interest, exchange, etc. paid on their behalf, and the securities are redeemed from the Fund to which both the Commonwealth and the State government make pre-determined contributions. The amounts to be contributed were varied when the *National Debt Sinking Fund Act 1966* repealed all previous legislation on sinking funds relating to securities on issue on behalf of the Commonwealth Government, and again in 1976 when the Act was amended to reflect the amendments to the Financial Agreement. In 1976 the Commonwealth assumed the responsibility for over \$1,000 million of States' debt existing as at 30 June 1975. As a consequence, the separate States' Sinking Funds were absorbed into the National Debt Sinking Fund, with separate accounts being maintained for the Commonwealth and each State.

For further information relating to the recent operations of the National Debt Sinking Fund reference should be made to the fifty-seventh annual report of the National Debt Commission. Particulars of the creation and operation of sinking funds by the *National Debt Sinking Fund Act 1923* are included in issues of the Year Book prior to No. 23, and a general description of the provisions applying between 1966 and 1976 is given in issue No. 61.

In the tables which follow, details are given of transactions in Commonwealth Government securities issued on account of the Commonwealth Government and the States. Amounts relating to overseas loans are shown in Australian currency equivalent calculated on the basis of the rates of exchange ruling at 30 June in each year shown. All amounts are at face value.

For figures which permit accurate analysis of the structure and movement of securities issued on behalf of the Commonwealth and States, refer to the Commonwealth Budget Paper No. 8, *Government Securities on Issue*.

### Net movement in securities on issue

Summary details of the net movement in securities issued for Commonwealth Government purposes and on account of the States during the period 1979-80 to 1984-85, are given in the following group of tables.

## NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE

(\$ million)

	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
<b>NEW SECURITIES ISSUED</b>						
<b>Securities repayable in Australian currency—</b>						
Treasury bonds . . . . .	1,485.7	2,774.7	3,385.8	6,253.8	10,850.0	9,222.2
Australian savings bonds . . . . .	806.1	2,024.0	1,312.9	4,204.6	3,599.1	505.2
Special bonds . . . . .	—	—	—	—	—	—
Income equalization deposits . . . . .	73.5	72.0	57.6	55.6	24.0	3.7
Drought bonds . . . . .	—	—	—	—	—	—
Advance loan subscriptions . . . . .	—	—	—	—	—	—
Overdue securities . . . . .	—	—	—	—	—	—
Tax-free stock . . . . .	—	—	—	—	—	—
Debentures . . . . .	—	—	—	—	—	—
Stock issued to Government savings banks under special agreements (a) . . . . .	36.5	54.6	53.3	61.9	114.6	71.1
Treasury notes . . . . .	7,870.4	12,058.1	12,594.5	—	—	—
Treasury bills—						
Internal . . . . .	141.8	2,234.2	1,718.0	—	—	—
Public . . . . .	500.0	14,706.0	14,200.0	—	—	—
Total . . . . .	10,913.9	33,923.6	33,322.1	10,575.9	14,587.8	9,802.2
<b>Securities repayable in overseas currencies(b)</b> . . . . .	482.1	178.2	831.3	1,077.0	1,238.4	1,729.1
<b>Total new securities issued</b> . . . . .	<b>11,396.0</b>	<b>34,101.8</b>	<b>34,153.4</b>	<b>11,652.9</b>	<b>15,826.2</b>	<b>11,531.3</b>
<b>REDEMPTIONS, REPURCHASES, CANCELLATIONS(c)</b>						
<b>Securities repayable in Australian currency—</b>						
Treasury bonds . . . . .	1,035.6	2,587.1	2,317.0	3,117.0	3,189.2	2,990.2
Australian savings bonds . . . . .	586.2	2,093.4	1,913.9	1,736.8	1,619.9	1,177.3
Special bonds . . . . .	44.6	251.4	122.8	71.0	31.5	—
Income equalization deposits . . . . .	16.4	45.1	55.2	65.8	48.6	40.5
Drought bonds . . . . .	0.2	0.1	0.1	—	—	—
Advance loan subscriptions . . . . .	—	—	—	—	—	—
Overdue securities . . . . .	0.6	-1.5	-3.3	8.2	9.0	8.8
Tax-free stock . . . . .	—	—	0.9	0.1	0.2	0.1
Debentures . . . . .	4.0	4.2	4.4	3.3	—	—
Stock issued to Government savings banks under special agreements (a) . . . . .	6.3	6.4	5.6	5.8	6.0	6.2
Treasury notes . . . . .	7,665.2	10,145.9	12,441.9	44.2	1,562.8	-821.7
Treasury bills—						
Internal . . . . .	—	2,888.3	1,509.7	152.2	479.6	212.9
Public . . . . .	—	15,306.0	14,700.0	1,400.0	—	—
Total . . . . .	9,359.1	33,326.4	33,068.1	6,604.5	6,946.9	3,614.4
<b>Securities repayable in overseas currencies(b)</b> . . . . .	340.4	922.5	131.3	1,523.9	666.1	—
<b>Total redemptions, etc.</b> . . . . .	<b>9,699.5</b>	<b>34,248.9</b>	<b>33,199.4</b>	<b>8,128.4</b>	<b>7,612.9</b>	<b>3,614.4</b>
<b>NET MOVEMENT</b>						
<b>Securities repayable in Australian currency—</b>						
Treasury bonds . . . . .	450.1	187.6	1,068.8	3,136.8	7,653.9	6,227.4
Australian savings bonds . . . . .	219.9	-69.4	-601.0	2,467.8	1,975.6	-674.2
Special bonds . . . . .	-44.6	-251.4	-122.8	-71.0	-31.9	—
Income equalization deposits . . . . .	57.1	26.9	2.4	-10.2	-24.5	-36.8
Drought bonds . . . . .	-0.2	-0.1	-0.1	—	-0.1	—
Advance loan subscriptions . . . . .	—	—	—	—	—	—
Overdue securities . . . . .	-0.6	1.5	3.3	-8.2	2.0	-2.2
Tax-free stock . . . . .	—	—	-0.9	-0.1	-0.2	-0.1
Debentures . . . . .	-4.0	-4.2	-4.4	-3.3	—	—
Stock issued to Government savings banks under special agreements (a) . . . . .	30.2	48.2	47.7	56.1	108.7	64.9
Treasury notes . . . . .	205.2	1,912.2	152.6	44.2	-1,562.8	821.7
Treasury bills—						
Internal . . . . .	141.8	654.1	208.3	-152.2	-479.6	-212.9
Public . . . . .	500.0	-600.0	-500.0	-1,400.0	—	—
Total . . . . .	1,554.8	597.2	254.0	3,971.4	7,640.9	6,187.8
<b>Securities repayable in overseas currencies(b)</b> . . . . .	141.7	-744.3	700.0	-446.9	164.8	2,767.7
<b>Net movement in securities on issue</b> . . . . .	<b>1,696.5</b>	<b>-147.1</b>	<b>954.0</b>	<b>3,524.5</b>	<b>7,805.7</b>	<b>8,955.5</b>

(a) Recorded in Commonwealth Government Loan Fund as State domestic raisings. (b) Australian currency equivalent at rates of exchange ruling at 30 June in each of the years shown. (c) Includes conversions from one type of security to another, which affect the net movements of individual loan categories, but do not affect the overall net movement.

NOTE: For securities repayable in overseas currencies the amounts shown also include an element due to exchange rate variations in Securities on Issue.

**Government securities on issue.**

The following table provides details of government securities on issue on account of the Commonwealth Government and the States, repayable in Australian and in overseas currencies.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH GOVERNMENT AND STATES**  
(\$ million)

	30 June					
	1980	1981	1982	1983	1984	1985
For Commonwealth Government purposes—						
Repayable in Australian currency—						
Treasury bonds	5,523.6	5,037.4	5,570.0	8,307.7	15,493.6	21,288.6
Australian savings bonds	1,496.0	1,215.7	381.2	2,633.9	4,577.3	3,914.7
Special bonds	75.9	30.4	11.1	1.3	—	—
Income equalization deposit	136.4	163.3	165.7	155.5	130.9	94.1
Drought bonds	0.4	0.3	0.2	0.1	—	—
Advance loan subscriptions	—	—	—	—	—	—
Overdue securities	3.0	4.4	7.8	6.8	8.8	6.7
Treasury notes	1,615.2	3,527.4	3,680.0	3,635.8	2,073.0	2,894.7
Treasury bills						
Internal	1,810.3	1,156.2	1,364.5	1,212.3	732.7	519.8
Public	2,500.0	1,900.0	1,400.1	—	—	—
Total	13,160.8	13,035.1	12,580.4	15,953.4	23,016.4	28,718.7
Repayable in overseas currencies(a)	5,326.4	4,618.7	5,335.7	6,905.2	7,076.2	9,845.2
Total Commonwealth Government	18,487.2	17,653.8	17,916.1	22,858.5	30,092.6	38,563.9
On account of States—						
Repayable in Australian currency						
Treasury bonds	11,856.8	12,530.7	13,067.0	13,464.2	13,932.2	14,364.6
Australian savings bonds	1,384.2	1,595.2	1,828.7	2,038.9	2,071.1	2,059.4
Special bonds	402.0	196.0	92.5	30.6	—	—
Tax-free stock	14.7	14.7	13.9	13.8	13.6	13.5
Stock issued to Government savings banks under special agreements	555.7	603.9	651.6	707.8	816.5	881.3
Debentures	11.9	7.7	3.3	—	—	—
Overdue securities	—	—	—	0.2	0.1	—
Total	14,225.4	14,948.2	15,657.0	16,255.5	16,833.4	17,318.9
Repayable in overseas currencies(a)	70.0	33.3	16.3	13.9	7.7	6.4
Total States	14,295.3	14,981.5	15,673.3	16,269.4	16,841.1	17,325.2
of which—						
New South Wales	4,666.8	4,885.4	5,108.1	5,327.9	5,566.5	5,773.5
Victoria	3,584.9	3,758.1	3,932.4	4,045.3	4,204.1	4,385.5
Queensland	1,931.8	2,022.4	2,113.0	2,198.7	2,291.6	2,376.6
South Australia	1,781.1	1,871.1	1,961.9	2,035.2	2,009.4	1,598.2
Western Australia	1,360.7	1,423.8	1,486.3	1,547.8	1,614.9	1,990.6
Tasmania	969.9	1,020.8	1,071.6	1,114.4	1,154.5	1,200.7
Total Commonwealth Government and States	32,782.6	32,635.4	33,589.4	39,127.9	46,933.6	55,889.1

(a) Australian currency equivalent.

**State and local authorities' borrowings**

The borrowings of Commonwealth, State and local authorities first came within the purview of the Loan Council under a 'gentlemen's agreement' originating in 1936. Since 1984-85 the 'gentlemen's agreement' has been replaced by the Global Approach whereby the Loan Council determines a voluntary global limit to apply to all new money borrowings by all public trading enterprises (except statutory marketing boards) and local governments. Details of the Global Approach are contained in Commonwealth Budget Paper No. 7 'Payments to and for the States, the Northern Territory and Local Government Authorities'.

The following table shows the aggregate borrowings by the State and local authorities in each of the years 1981-82 to 1985-86.

**BORROWINGS BY SEMI-GOVERNMENT AND LOCAL AUTHORITIES  
1981-82 TO 1985-86**

*(Source: Commonwealth Budget Paper (1985-86) No. 7 Table 105)*

	New South Wales	Victoria	Queens- land	Western Australia	South Australia	Tasmania	Total States	Common- wealth and Northern Territory	Total
<b>CONVENTIONAL BORROWINGS BY SEMI-GOVERNMENT AND LOCAL AUTHORITIES (a)</b>									
1981 82 . . .	818,261	734,833	524,878	275,088	148,791	97,854	2,599,705	360,168	2,959,873
1982 83 . . .	1,066,500	1,269,200	971,250	462,104	249,918	162,954	4,181,926	314,659	4,496,585
1983 84 . . .	1,164,200	1,207,100	908,972	650,246	173,400	173,759	4,277,677	360,742	4,638,419
1984 85 . . .	1,337,282	2,007,160	736,789	770,442	478,500	225,623	5,555,796	629,639	6,185,435
<b>OTHER BORROWINGS BY SEMI-GOVERNMENT AND LOCAL AUTHORITIES (b)</b>									
1981 82 . . .	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
1982 83 . . .	881,152	291,309	384,750	198,900	194,400	119	1,950,630	471,661	2,422,291
1983 84 . . .	729,692	373,231	743,028	148,500	307,600	6,477	2,308,528	484,774	2,793,302
1984 85 . . .	603,366	3,678	815,211	47,616	14,500	3,365	1,487,736	609,556	2,097,292
<b>TOTAL BORROWINGS BY SEMI-GOVERNMENT AND LOCAL AUTHORITIES (c)</b>									
1981 82 . . .	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
1982 83 . . .	1,947,652	1,560,509	1,356,000	661,004	444,318	163,073	6,132,556	786,320	6,918,876
1983 84 . . .	1,893,892	1,580,331	1,652,000	798,746	481,000	180,236	6,686,205	845,516	7,431,721
1984 85 . . .	1,940,648	2,010,838	1,552,000	818,058	493,000	228,988	7,043,532	1,239,195	8,282,727
1985 86 . . .	2,060,000	1,953,000	1,552,000	744,700	400,000	230,000	6,939,700	1,186,500	8,126,200

(a) Includes conventional loan raisings under the *Gentlemen's Agreement* for the years 1981-82 to 1983-84, and within the global limits for 1984-85.

(b) Includes borrowings by way of domestic deferred payments, overseas trade credits, financial leases, sale and leaseback and similar arrangements, security deposits and other repayable capital contributions, and identified net changes in temporary purpose borrowings over the financial year. Comparable data for 1981-82 are not available. Figures for Queensland are Commonwealth Treasury estimates.

(c) Includes conventional and other borrowings. Amounts for South Australia for 1982-83 and 1983-84 represent new money borrowings by the South Australian public sector net of that State Government's Loan Council program. Components are: Borrowings by authorities and companies, 1982 83 \$389.3m, 1983 84 \$311.3m. Non-conventional borrowings by the State Government 1982-83 \$55.0m, 1983 84 \$169.7m. The global borrowing program for 1984 85 includes conventional borrowings of \$119 million by the South Australian Financing Authority on-lent to the South Australian Government. The amount to be on-lent to the South Australian Government from the 1985 86 global limit has not yet been determined. Figures for Queensland are Commonwealth Treasury estimates.

Additional details of the transactions of public authorities engaged in particular fields of activity, such as defence, transport and communication, health and welfare, education, etc., may be found in other chapters of this Year Book.

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### ABS Publications

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- Digest of Current Economic Statistics, Australia (1305.0);
- Australian National Accounts, National Income and Expenditure (5204.0);
- Quarterly Estimates of National Income and Expenditure, Australia (5206.0);
- Government Financial Estimates, Australia (5501.0);
- Commonwealth Government Finance (5502.0);
- State and Local Government Finance, Australia (5504.0) and Taxation Revenue, Australia (5506.0);
- Standardised Local Government Finance Statistics (tape and microfiche service) (1212.0)

### Other Publications

- Australian Taxation Office
- Department of Primary Industry

## CHAPTER 23

### NATIONAL ACCOUNTS

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

Estimates of national income and expenditure have been compiled by the ABS since 1944–45 and have been published annually as papers entitled *National Income and Expenditure* accompanying the Commonwealth Budgets. (Other national accounting publications are also produced regularly. A list of these can be found at the end of this chapter.)

### NATIONAL INCOME AND EXPENDITURE

#### Description of National Income and Expenditure Accounts

A brief description of the conceptual basis of national accounts is given in this section, but for a more detailed treatment of the concepts and structure of the Australian national accounts reference should be made to *Australian National Accounts, Concepts, Sources and Methods* (5216.0).

#### Definition and relationship of the concepts of product, income and expenditure

The main concepts of product, income and expenditure in the Australian National Accounts are defined and expressed in equivalents as follows.

*Gross domestic product* is the total market value of goods and services produced in Australia within a given period after deduction of the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. Thus, gross domestic product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services. *Gross farm product* is that part of gross domestic product which derives from production in agriculture and services to agriculture. *Gross non-farm product* arises from production in all other industries.

*Gross domestic product at factor cost* is that part of the cost of producing the gross domestic product which consists of gross payments to factors of production (labour, land, capital and enterprise). It represents the value added by these factors in the process of production and is equivalent to gross domestic product less net indirect taxes.

*Domestic factor incomes* is that part of the value added within a given period by factors of production (labour, land, capital and enterprise) which accrues as income to their suppliers after allowing for the depreciation of fixed capital. It is equivalent to gross domestic product at factor cost less depreciation allowances.

*National income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production (labour, land, capital and enterprise) in Australia or overseas plus indirect taxes less subsidies. It is equivalent to domestic factor incomes plus indirect taxes less subsidies and net income paid overseas.

*National disposable income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production, from net indirect taxes and from net transfers from overseas. It is equivalent to national income less net transfers overseas plus net withholding taxes received from overseas.

*Gross national expenditure* is the total expenditure within a given period on final goods and services (i.e. excluding goods and services used up during the period in the process of production) bought by Australian residents. It is equivalent to the gross domestic product plus imports of goods and services less exports of goods and services.

*Household income* is the total income, whether in cash or kind, received by persons normally resident in Australia in return for productive activity (such as wages, salaries and supplements, incomes of unincorporated enterprises, etc.) and transfer incomes (such as cash

social service benefits, interest, etc.). It includes the imputed interest of life offices and superannuation funds, which is the benefit accruing to policy holders and members from investment income of the funds. It also includes third party motor vehicle and public risk insurance claims paid to persons in respect of policies taken out by enterprises. However, it excludes any income which might be said to accrue to persons in the form of undistributed company income. It also includes any property income received by non-profit organisations such as private schools, churches, charitable organisations, etc.

The relationship between these aggregates (other than household income) are illustrated in the following diagram.

**RELATIONSHIP OF MAIN IDENTITIES**

National turnover of goods and services	Imports of goods and services	Imports of goods and services	Imports of goods and services	Imports of goods and services	Imports of goods and services	Imports of goods and services	Exports of goods and services
	Gross domestic product	Gross domestic product at factor cost	Domestic factor incomes	Net income paid overseas	Net income paid overseas	Net income paid overseas	
				Net transfers to overseas	Net transfers to overseas		
				Net lending to overseas	Net lending to overseas		
National income	National disposable income	Gross national expenditure	Gross national expenditure				
Indirect taxes less subsidies	Indirect taxes less subsidies	Depreciation allowances	Depreciation allowances	Depreciation allowances	Depreciation allowances		

**PLATE 42**

**Framework of accounts and sectors**

In the Australian national accounts, four internal sectors are distinguished: corporate trading enterprises (including public trading enterprises), financial enterprises (including the nominal industry), households (including their unincorporated enterprises) and general government. All of these internal sectors engage in productive activity, receive and disburse income and accumulate assets. In this publication no accounts are shown for individual internal sectors. The transactions of the internal sectors are summarised in three accounts: a domestic production account (see page 578), a national income and outlay account (see page 579) and a national capital account (see page 579). In addition, there is an overseas sector having an account (see page 580) which shows a summary of the transactions into which overseas governments, persons and businesses enter with Australian residents.

The framework of sectors and accounts underlying the Australian national accounts is set out in the following diagram. The heavy rectangles depict the minimum system of four accounts which represent the consolidated accounts of the nation. The light rectangles represent the accounts for institutional sectors. The subdivision of the domestic production account represents production accounts for establishments classified according to industry. Selected transactions from such production accounts are shown in *Australian National Accounts, National Income and Expenditure* (5204.0). Such production accounts can be developed in detail to produce input-output tables.

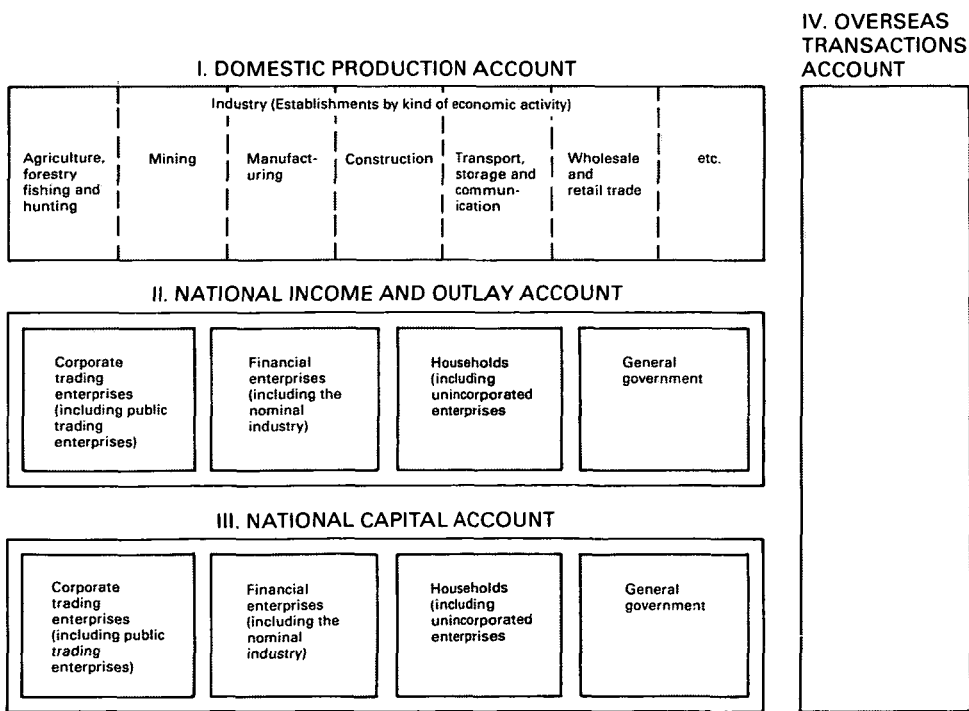
**Description of the accounts**

The *domestic production account* is a consolidation of the production accounts of all producers regardless of sector. The production account is shown as receiving revenue from the sale of goods and services to final buyers; all intermediate goods and services are cancelled out, since they represent a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes less subsidies, and, since the account is presented from the point of view of the producing unit, the wages and salaries paid to employees. The balance is the gross operating surplus which may be divided into depreciation allowances and net operating surplus. Depreciation allowances is carried to the national capital account (or the sector capital accounts) and net operating surplus, together with wages and salaries and indirect taxes less subsidies, is carried to the national income and outlay account (or sector income and outlay accounts). In input-output tables, the domestic production account is broken up into accounts for separate industries, and transactions associated with intermediate usage of goods and services are shown in the production accounts for the separate industries.

The *national income and outlay account* is shown as receiving wages, salaries and supplements, net operating surplus and indirect taxes less subsidies from the domestic production account. From this income are deducted net payments of income and miscellaneous transfers to overseas; the remainder is the national disposable income. The outlay side of the account shows that this disposable income is largely used for final consumption expenditure and the balance is the nation's saving. The national income and outlay account is a consolidation of the sector income and outlay accounts.

The *national capital account* is a consolidation of the sector capital accounts. It shows on the receipts side depreciation allowances transferred from the domestic production account and saving transferred from the national income and outlay account (or from the sector income and outlay accounts). On the payments side are shown purchases by all sectors of

**ARTICULATION OF AUSTRALIAN NATIONAL ACCOUNTS**



**PLATE 43**

new buildings and capital equipment, the increase in stocks of all sectors and a balance described as net lending to overseas. This concept of net lending to overseas includes increases (and, negatively, decreases) in Australia's overseas monetary reserves. The net lending to overseas is also the balance on current transactions in the overseas transactions account.

The *overseas transactions account* records all transactions of a current nature between Australian and overseas residents. Although this is an account for the overseas sector, the items are named from the Australian viewpoint. The account shows that Australia's current receipts from overseas consist of the value of Australia's exports of goods and services, property income received from overseas, transfers from overseas and withholding taxes from overseas. These receipts are used for Australia's imports of goods and services and payments of property income and transfers to overseas; the balance of current receipts represents net lending to overseas. Positive net lending to overseas corresponds to a surplus on current transactions with overseas, and negative net lending corresponds to a deficit. The transactions in property income shown in this account differ from estimates shown in balance of payments statistics because, in the national accounts, undistributed company income is not imputed to the beneficial owners. For this reason, net lending to overseas differs from the balance on current account shown in balance of payments statistics.

#### **Estimates at constant prices**

For certain kinds of intertemporal comparison, it is desirable to derive measures which attempt to remove the direct effect of price changes during the periods under review. Such estimates, conventionally described as 'at constant prices', are presented in tables for gross domestic product, exports and imports of goods and services, and gross national expenditure and its principal components shown on pages 578 and 581 respectively.

Chapter 4 of *Australian National Accounts, Concepts, Sources and Methods* (5216.0) contains a discussion of the conceptual problems involved in making these estimates. Chapter 12 of that publication contains a brief account of the sources and methods used in preparing the estimates.

It should be noted that estimates at constant prices involve approximations and assumptions, and care must be taken in the interpretation and use of results.

#### **Reliability and revisions**

Estimates of national income and expenditure are necessarily prepared from a very wide range of statistical information, some of which is available quickly and some of which is available only after a delay of several years. Some of it is closely related to the desired national income concepts, but some of it is not completely satisfactory in various respects, including coverage, concepts and timing. Estimates, in particular for the most recent years, are therefore subject to revision. This applies particularly to estimates based on income tax statistics—income of companies, non-farm unincorporated enterprises, depreciation, and part of private gross fixed capital expenditure—which are subject to substantial revisions for the last one or two years because tabulations of income tax statistics become available progressively one to two years after the end of each financial year.

It is not possible to put precise limits on the degree of revision likely to any particular series, nor to state degrees of reliability in a statistical sense. These depend in large part on the range and quality of the basic statistical data.

### **National income and expenditure tables**

NOTE. Items in all current price tables are numbered from 1 to 20, with or without the addition of a letter, and this system is used to identify the corresponding credit and debit entries in the accounts. In some cases the items correspond exactly, while in other cases an entry in one table is the sum of two or more entries in other tables; here the total is given a number, and the components have a number and a letter. In the remaining type of case all entries are given the same number and a distinguishing letter, because in this group one item is not the sum of one or more entries. The relationship between these items can still be traced through because the sum of all credit entries must equal the sum of all debit entries. A description of the numbered items can be found in *Australian National Accounts, Concepts, Sources and Methods* (5216.0).

The figures shown in the first six tables are as published in *Budget Paper No. 10, National Income and Expenditure, 1984–85* (5213.0). The figures shown in the last table are consistent with those published in *Quarterly Estimates of National Income and Expenditure, Australia, June Quarter 1985* (5206.0).



NATIONAL ACCOUNTS  
DOMESTIC PRODUCTION ACCOUNT  
(\$ million)

	1982-83	1983-84	1984-85
Final consumption expenditure—			
1 Private . . . . .	103,216	114,189	125,714
2 Government . . . . .	28,318	31,311	35,508
Gross fixed capital expenditure—			
3 Private . . . . .	25,068	25,946	28,402
4 Public enterprises . . . . .	8,200	8,216	10,326
5 General government . . . . .	5,595	6,479	7,645
6 Increase in stocks . . . . .	-2,482	1,390	1,370
7 Statistical discrepancy . . . . .	1,068	1,756	2,480
<i>Gross national expenditure</i> . . . . .	<i>168,983</i>	<i>189,287</i>	<i>211,445</i>
8 Exports of goods and services . . . . .	24,470	27,801	34,321
9 <i>Less</i> Imports of goods and services . . . . .	28,147	30,538	38,677
<b>Expenditure on gross domestic product</b> . . . . .	<b>165,306</b>	<b>186,550</b>	<b>207,089</b>
10 Wages, salaries and supplements . . . . .	92,935	98,120	107,648
Gross operating surplus—			
Trading enterprises—			
11a Companies . . . . .	17,311	22,986	25,924
11b Unincorporated enterprises . . . . .	15,330	19,515	20,276
11c Dwellings owned by persons . . . . .	14,157	16,684	19,653
Public enterprises . . . . .	5,135	6,117	7,093
11e Financial enterprises . . . . .	4,715	4,956	5,418
11f <i>Less</i> Imputed bank service charge . . . . .	4,305	4,953	5,524
<i>Gross domestic product at factor cost</i> . . . . .	<i>145,278</i>	<i>163,425</i>	<i>180,488</i>
12 Indirect taxes <i>less</i> subsidies . . . . .	20,028	23,125	26,601
<b>Gross domestic product</b> . . . . .	<b>165,306</b>	<b>186,550</b>	<b>207,089</b>
Gross farm product . . . . .	5,890	9,006	8,685
Gross non-farm product . . . . .	159,416	177,544	198,404

EXPENDITURE ON GROSS DOMESTIC PRODUCT AT AVERAGE 1979-80 PRICES  
(\$ million)

	1982-83	1983-84	1984-85
Final consumption expenditure—			
Private . . . . .	77,359	79,293	81,988
Government . . . . .	20,256	21,148	22,610
Gross fixed capital expenditure—			
Private . . . . .	18,638	18,177	18,829
Public . . . . .	9,680	9,699	11,189
Increase in stocks . . . . .	-1,803	1,282	1,011
Statistical discrepancy . . . . .	821	1,213	1,659
<i>Gross national expenditure</i> . . . . .	<i>124,951</i>	<i>130,812</i>	<i>137,286</i>
Exports of goods and services . . . . .	20,846	22,391	25,710
<i>Less</i> Imports of goods and services . . . . .	23,022	24,405	28,250
<b>Expenditure on gross domestic product</b> . . . . .	<b>122,775</b>	<b>128,798</b>	<b>134,746</b>
Gross farm product . . . . .	6,366	8,486	8,370
Gross non-farm product . . . . .	116,409	120,312	126,376

## NATIONAL INCOME AND OUTLAY ACCOUNT

(\$ million)

	1982-83	1983-84	1984-85
10 Wages, salaries and supplements . . . . .	92,935	98,120	107,648
11g Net operating surplus . . . . .	40,170	51,600	57,490
<i>Domestic factor incomes.</i>	133,105	149,720	165,138
13 Less Net income paid overseas . . . . .	3,335	4,121	5,305
12a Indirect taxes . . . . .	22,937	26,201	29,876
12b Less Subsidies . . . . .	2,909	3,076	3,275
<i>National income</i>	149,798	168,724	186,434
14 Less Net transfers to overseas . . . . .	455	530	427
15g Withholding taxes from overseas . . . . .	258	304	403
<b>National disposable income</b>	<b>149,601</b>	<b>168,498</b>	<b>186,410</b>
Final consumption expenditure—			
1 Private . . . . .	103,216	114,189	125,714
2 Government . . . . .	28,318	31,311	35,508
15 to Saving . . . . .	18,067	22,998	25,188
19 <b>Disposal of income</b>	<b>149,601</b>	<b>168,498</b>	<b>186,410</b>

## NATIONAL CAPITAL ACCOUNT

(\$ million)

	1982-83	1983-84	1984-85
11h Depreciation allowances . . . . .	12,173	13,705	15,350
Saving—			
15 Increase in income tax provisions . . . . .	-603	700	419
Undistributed income—			
16a Trading enterprises . . . . .	409	3,197	3,391
16b Financial enterprises . . . . .	865	791	1,016
17 Household saving . . . . .	15,254	18,188	18,619
18 General government surplus on current transactions . . . . .	1,942	122	1,743
19 Extraordinary insurance claims paid . . . . .	200	..	..
<b>Finance of gross accumulation</b>	<b>30,240</b>	<b>36,703</b>	<b>40,538</b>
Gross fixed capital expenditure—			
Private—			
3a Dwellings . . . . .	5,483	6,286	7,718
3b Non-dwelling construction . . . . .	4,759	3,835	4,708
3c Equipment . . . . .	13,402	13,755	13,514
3d Real estate transfer expenses . . . . .	1,424	2,070	2,462
4 Public enterprises . . . . .	8,200	8,216	10,326
5 General government . . . . .	5,595	6,479	7,645
<i>Total gross fixed capital expenditure</i>	38,863	40,641	46,373
Increase in stocks—			
6a Private non-farm . . . . .	-2,213	-356	1,295
6b Farm . . . . .	-292	422	34
6c Public marketing authorities . . . . .	-215	1,163	34
6d Other public authorities . . . . .	238	161	7
7 Statistical discrepancy . . . . .	1,068	1,756	2,480
20 Net lending to overseas . . . . .	-7,209	-7,084	-9,685
<b>Gross accumulation</b>	<b>30,240</b>	<b>36,703</b>	<b>40,538</b>

## GROSS FIXED CAPITAL EXPENDITURE AND INCREASE IN STOCKS AT AVERAGE 1979-80 PRICES

(\$ million)

	1982-83	1983-84	1984-85
Gross fixed capital expenditure—			
Private—			
Dwellings . . . . .	3,943	4,325	4,948
Non-dwelling construction . . . . .	3,308	2,538	2,941
Equipment . . . . .	10,309	9,870	9,442
Real estate transfer expenses . . . . .	1,078	1,444	1,498
<i>Total private</i> . . . . .	<i>18,638</i>	<i>18,177</i>	<i>18,829</i>
Public—			
Public enterprises . . . . .	5,844	5,537	6,512
General government . . . . .	3,836	4,162	4,677
<i>Total public</i> . . . . .	<i>9,680</i>	<i>9,699</i>	<i>11,189</i>
<b>Total</b> . . . . .	<b>28,318</b>	<b>27,876</b>	<b>30,018</b>
Increase in stocks—			
Private non-farm . . . . .	-1,654	-256	935
Farm . . . . .	-130	242	62
Public marketing authorities . . . . .	-196	1,182	12
Other public authorities . . . . .	177	114	2
<b>Total</b> . . . . .	<b>-1,803</b>	<b>1,282</b>	<b>1,011</b>

## OVERSEAS TRANSACTIONS ACCOUNT

(\$ million)

	1982-83	1983-84	1984-85
9a Imports f.o.b. . . . .	21,705	23,497	30,131
9b Transportation . . . . .	3,663	3,866	4,730
9c Travel . . . . .	1,916	2,177	2,588
9d Government transactions . . . . .	371	387	442
9e Other goods and services . . . . .	492	611	786
9 <i>Imports of goods and services</i> . . . . .	<i>28,147</i>	<i>30,538</i>	<i>38,677</i>
13a Property income to overseas . . . . .	4,222	5,362	6,872
14a Personal transfers overseas . . . . .	600	635	670
14b General government transfers overseas . . . . .	803	863	959
20 Net lending to overseas . . . . .	-7,209	-7,084	-9,685
<b>Use of current receipts</b> . . . . .	<b>26,563</b>	<b>30,314</b>	<b>37,493</b>
8a Exports f.o.b. . . . .	20,656	23,682	29,531
8b Transportation . . . . .	2,185	2,273	2,720
8c Travel . . . . .	1,113	1,277	1,455
8d Government transactions . . . . .	194	207	214
8e Other goods and services . . . . .	322	362	401
8 <i>Exports of goods and services</i> . . . . .	<i>24,470</i>	<i>27,801</i>	<i>34,321</i>
13b Property income from overseas . . . . .	887	1,241	1,567
14c Personal transfers from overseas . . . . .	920	968	1,202
14d Extraordinary insurance claims . . . . .	28	..	..
15g Withholding taxes . . . . .	258	304	403
<b>Current receipts from overseas</b> . . . . .	<b>26,563</b>	<b>30,314</b>	<b>37,493</b>

## MAIN AGGREGATES AT CURRENT PRICES, 1959-60 TO 1984-85

(\$ million)

Year	1		2	3	4	5	6	7
	Final consumption expenditure		Private gross fixed capital expenditure	Public gross fixed capital expenditure	Increase in stocks	Statistical discrepancy	Gross national expenditure	(1 to 6)
	Private	Government						
1959-60	9,049	1,288	2,276	1,157	168	-87	13,851	
1960-61	9,602	1,393	2,501	1,203	478	-166	15,011	
1961-62	9,898	1,510	2,400	1,323	-219	-242	14,670	
1962-63	10,613	1,583	2,671	1,375	253	-229	16,266	
1963-64	11,477	1,747	3,028	1,527	120	-255	17,644	
1964-65	12,417	2,027	3,527	1,789	561	-145	20,176	
1965-66	13,203	2,336	3,784	1,992	109	-187	21,237	
1966-67	14,264	2,669	3,966	2,108	360	-296	23,071	
1967-68	15,565	3,130	4,320	2,265	113	-421	24,972	
1968-69	16,874	3,243	4,991	2,410	682	-263	27,937	
1969-70	18,597	3,591	5,424	2,639	439	-117	30,573	
1970-71	20,548	4,103	6,119	2,883	447	-282	33,818	
1971-72	22,832	4,691	6,600	3,283	11	-47	37,370	
1972-73	25,600	5,338	7,237	3,482	-290	61	41,428	
1973-74	30,236	6,731	8,444	4,045	1,172	902	51,530	
1974-75	36,770	9,051	8,958	5,865	1,022	701	62,367	
1975-76	43,927	11,198	11,048	6,886	139	-181	73,017	
1976-77	50,287	13,082	12,714	7,199	1,128	-172	84,238	
1977-78	55,760	14,740	13,685	7,927	-465	276	91,923	
1978-79	62,833	16,373	16,211	8,258	1,271	-581	104,365	
1979-80	70,854	18,290	17,883	8,974	800	-1,049	115,752	
1980-81	80,257	21,514	22,939	10,150	458	150	135,468	
1981-82	91,349	24,690	27,511	11,254	1,524	-173	156,155	
1982-83	103,216	28,318	25,068	13,795	-2,482	1,068	168,983	
1983-84	114,189	31,311	25,946	14,695	1,390	1,756	189,287	
1984-85	125,714	35,508	28,402	17,971	1,370	2,480	211,445	

Year	8	9	10	11	12	13	14
	Exports of goods and services	Imports of goods and services	Gross domestic product (7 + 8-9)	Gross domestic product at factor cost	National income	Household income	Wages, salaries and supplements
1959-60	2,142	2,285	13,708	12,238	12,451	10,867	6,961
1960-61	2,166	2,601	14,576	13,010	13,191	11,678	7,500
1961-62	2,458	2,204	14,924	13,398	13,466	12,130	7,748
1962-63	2,481	2,610	16,137	14,500	14,563	12,925	8,202
1963-64	3,150	2,860	17,934	16,171	16,213	14,359	8,965
1964-65	3,035	3,473	19,738	17,787	17,850	15,712	10,056
1965-66	3,122	3,617	20,742	18,601	18,666	16,533	10,871
1966-67	3,468	3,695	22,844	20,577	20,553	18,329	11,883
1967-68	3,549	4,134	24,387	21,924	21,869	19,288	12,951
1968-69	3,877	4,268	27,546	24,828	24,784	21,700	14,353
1969-70	4,736	4,758	30,551	27,556	27,476	23,974	16,143
1970-71	5,032	5,092	33,758	30,509	30,493	26,870	18,532
1971-72	5,605	5,217	37,758	34,092	34,209	30,418	20,686
1972-73	6,944	5,348	43,024	38,882	39,189	34,992	23,117
1973-74	7,810	7,774	51,566	46,412	47,534	42,952	28,337
1974-75	9,921	10,227	62,061	55,773	57,345	53,568	36,427
1975-76	11,005	10,831	73,191	64,999	67,609	62,703	41,946
1976-77	13,206	13,788	83,656	74,455	77,038	71,679	47,331
1977-78	13,979	15,008	90,894	81,174	83,525	79,145	51,992
1978-79	16,502	17,784	103,083	91,737	94,716	88,206	55,871
1979-80	21,586	20,921	116,417	102,962	106,761	98,404	62,314
1980-81	22,003	24,766	132,705	117,267	121,548	112,633	72,268
1981-82	22,656	28,558	150,253	132,707	136,706	130,146	83,804
1982-83	24,470	28,147	165,306	145,278	149,798	145,324	92,935
1983-84	27,801	30,538	186,550	163,425	168,724	161,261	98,120
1984-85	34,321	38,677	207,089	180,488	186,434	178,432	107,648

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## CHAPTER 24

### FOREIGN TRANSACTIONS

This chapter includes statistics of foreign trade, balance of payments, foreign investment by private investors; and foreign ownership and control of enterprises in Australia. Because of limitations of space, the statistics are mainly restricted to summarised form.

#### FOREIGN TRADE

##### Constitutional provisions and legislation

###### Constitutional provisions

By the Commonwealth of Australia Constitution Act, section 51 (1), the power to make laws with respect to trade and commerce with other countries was conferred on the Australian Parliament. Under section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1 January 1901. Other references to trade and commerce are contained in sections 87 to 95 of the Constitution.

###### Commonwealth Government Legislation

Commonwealth Government legislation affecting overseas trade includes the *Customs Acts 1901*, the *Customs Tariff Act 1982* and the *Customs Tariff (Anti-Dumping) Act 1975*. The *Customs Tariff Act 1982* provides the statutory authority for imposing the actual rates of duty operative from time to time, while the *Customs Tariff (Anti-Dumping) Act 1975* provides protection for Australian industry against various forms of unfair trading.

###### The Customs Tariff

The first *Australian Customs Tariff* was introduced by Resolution on 8 October 1901, from which date uniform duties came into effect throughout Australia. The *Australian Customs Tariff* was developed in a period when Government industry policy was influenced by a desire to protect Australian industries from import competition. More recently however, Governments have held the view that for Australia to maximise its national income, it must encourage industries which are capable of operating under lower levels of protection. While customs collections are still a major source of revenue, the reliance on tariffs as an industry assistance measure is diminishing, with more emphasis being placed on measures which actively assist industry to improve its efficiency.

The Tariff has recently been simplified and it is anticipated that on 1 January 1987 Australia will introduce a new Tariff based on the Customs Co-operation Council Convention on the Harmonized Commodity description and Coding System.

The customs value of imported goods is established in accordance with the principles of Article VII of the General Agreement on Tariffs and Trade. This system is given effect by Section 154-Section 161 (D) of the Customs Act.

The system provides several methods of valuing goods for Customs purposes as provided in Section 157 (1)-Section 157 (8).

In an unconditional sale the customs value of imported goods will be based as far as possible on the transaction value method. This method provides for the acceptance of the price actually paid or payable to the vendor, provided sufficient and reliable information is available for this purpose.

This price may be subject to adjustments vide Section 154 (2) and Section 159 (3).

If there is no price paid or payable or the price is unacceptable the other valuation methods must be attempted sequentially.

*Rates of duty.* The *Customs Tariff Act 1982* provides for three distinct types of rates—*General rates*. These are set out in Schedule 3 to the Customs Tariff Act and apply to goods from all countries that do not qualify for either Special rates of duty or Concessional rates of duty for a particular tariff classification.

*Special rates.* These are set out in Schedule 3 to the Customs Tariff Act and apply to goods the produce or manufacture of specified countries being:

*Forum Island Countries.* These countries are set out in Part I of Schedule 1 to the Customs Tariff Act and preference is given to goods the subject of the South Pacific Regional Trade and Economic Co-operation Agreement (SPARTECA).

*Declared Preference Countries.* These countries are set out in Part II of Schedule 1.

*Developing Countries.* Those countries are set out in Part III of Schedule 1.

*Papua New Guinea.* The rates of duty are set out in Schedule 3 and preference is given to goods the subject of the Papua New Guinea/Australia Trade and Commercial Relations Agreement (PATCRA). Wherever PNG is not mentioned in Schedule 3, goods take a FREE rate of duty.

*New Zealand.* The rates of duty are set out in Schedule 5 to the *Customs Tariff Act 1982* and preference is given to goods the subject of the Australia/New Zealand Closer Economic Relations—Trade Agreement (ANZCERTA). Wherever a tariff classification does not appear in relation to goods in Schedule 5 a FREE rate of duty shall apply.

*Canada.* The rates of duty are set out in Schedule 3 and preference is given to goods the subject of the Canada/Australia Trade Agreement (CANATA).

*Concessional rates.* The rates of duty are set out in Schedule 4 to the *Customs Tariff Act 1982—Part I*, applies to Special Concessional rates of duty and is applicable to imports from all sources complying with particular ownership or other provisions.

Part II applies to Substituted Concessional rates of duty and is applicable to goods subject to tariff quotas.

For details on calculation of Dumping or Countervailing duties, see the *Customs Tariff (Anti-Dumping) Act 1975* and the publication: *Anti-Dumping and Countervailing Information* which are available from Customs Houses in capital cities or from the Australian Customs Service, Barton A.C.T. 2600.

### **Import restrictions**

Import controls, by global tariff quotas or import licensing, are introduced to assist local industry following inquiry and report by the Industries Assistance Commission. At present the textile, clothing and footwear industries are assisted by tariff quotas while the motor vehicle industry had, until 31 December 1984 been assisted by import licensing. From 1 January 1985 the control of the motor vehicle industry was altered to tariff quotas. Import licensing firmly limits import quantities, provides for penal and seizure action and may be selectively applied to particular goods or countries. As such, it differs from global tariff quotas which allow imports up to a predetermined level, above which additional duties may be imposed. As part of the seven year quota control programme for textiles, clothing and footwear which commenced on 1 January 1982, a portion of quota is allocated by tender. Concessionary quotas are made available to imports from developing countries and allow for concessional entry of certain goods. The SPARTECA (South Pacific Trade and Economic Co-operation Agreement) quota also provides for concessional treatment of certain goods imported from Island Member Countries of the South Pacific Forum. Further information on import controls may be obtained from the Quota Control Branch of the Australian Customs Service, Barton A.C.T. 2600.

*Import prohibitions.* Section 50 of the *Customs Act 1901* provides that the Governor-General may, by regulation, prohibit the importation of goods into Australia and that this power may be exercised by:

- (a) prohibiting the importation of goods absolutely;
- (b) prohibiting the importation of goods from a specified place; or
- (c) prohibiting the importation of goods unless specified conditions or restrictions are complied with.

Goods subject to these import controls are listed in the Customs (Prohibited Imports) Regulations.

Import prohibitions may also be imposed under the Quarantine Act; the Wildlife Protection (Regulation of Exports and Imports) Act; and sundry allied Commonwealth and State legislation.

### **Export controls**

*Export restrictions.* Section 112 of the *Customs Act 1901* provides that the Governor-General may, by regulation, prohibit the exportation of goods from Australia and that this power may be exercised by: (a) prohibiting the exportation of goods absolutely; (b) prohib-

iting the exportation of goods to a specified place; or (c) prohibiting the exportation of goods unless prescribed conditions or restrictions are complied with. Goods subject to this export control are listed in the Customs (Prohibited Exports) Regulations. Export prohibitions may also be imposed under the Export Control Act administered by the Department of Primary Industry; the Wildlife Protection (Regulation of Exports and Imports) Act administered by the Department of Arts, Heritage and Environment; the Quarantine Act; and sundry allied Commonwealth and State legislation.

*Exchange control.* Up to 25 June 1984, control over goods exported from Australia was maintained under the Banking (Foreign Exchange) Regulations to ensure that the full proceeds from the sale of such goods were received into the Australian banking system. However, as part of the general relaxation of exchange controls announced by the Government and applying from 25 June 1984, controls in respect of export proceeds were removed completely.

### **Trade descriptions**

*The Commerce (Trade Descriptions) Act 1905.* This Act, administered by the Australian Customs Service, gives power to require the application of a proper trade description to certain prescribed goods imported into or exported from Australia. Goods which must bear a prescribed trade description upon importation into Australia are specified in the Commerce (Imports) Regulations. As regards exports from Australia, marking requirements are prescribed in regulations issued under the Act and in relation to specified export commodities.

## **Trade promotion and incentives**

Each year the Commonwealth Government through the Department of Trade undertakes an extensive overseas trade promotion and publicity program.

### **Trade displays, fairs and exhibitions**

For many years Australia has organised or participated in numerous major trade fairs, exhibitions and displays throughout the world.

Major emphasis is placed on participation in specialised trade displays directed almost entirely at the business community. In addition, display rooms in Trade Commissioner offices are currently in use in Singapore, Kuala Lumpur, Seoul, Hong Kong, Jakarta, Port Moresby, Suva, Bangkok, Wellington and Auckland. Limited display space is also available in Tokyo.

### **Trade missions**

At present the following types of trade missions are in use:

*Survey missions.* These are organised to obtain precise knowledge about the export trade potential for specific products in one or more overseas markets. Such methods are used to explore export prospects in new or developing areas where commercial intelligence is not readily available or where a complex industry is involved and the industry requires special export knowledge.

*Specialised and general trade missions.* Arrangements are made for specific industries or groups of firms representing a number of industries to participate in a planned selling campaign in overseas markets with known sales potential. The mission visits the market, publicises its products, establishes agencies and negotiates sales.

### **Publications and advertising**

The Department of Trade produces a range of English language and multi-lingual publications for distribution overseas through its Trade Commissioner posts. Special publications are produced for major Australian promotional activities overseas. The promotional activities are also supported by appropriate editorial publicity and advertising in foreign media publications.

### **Market advisory services**

The Australian Government has established a Market Advisory Section in the Department of Trade to advise and assist developing countries and countries with centrally planned economies in the marketing of their products in Australia. The Section, which is located in Canberra, is supported by two experienced Australian Trade Commissioners—one located in Sydney and the other in Melbourne—to maintain contact with the commercial sector and provide direct practical assistance.

To further assist developing countries the Government has established International Trade Development Centres in Sydney and Melbourne. The Centres house the local offices of the



Market Advisory Service and provide a venue for small trade displays by developing countries as well as for other activities such as marketing seminars.

The Centres are operated by the Department of Trade and are funded under Australia's development assistance programme. From time to time short training courses on trade promotion topics are held at the Centres for officials from developing countries.

#### **Export awards**

The Department of Trade in conjunction with the Confederation of Australian Industry runs an annual program of Export Awards for Outstanding Export Achievement. In addition various other awards are also given from time to time.

#### **Export incentives**

The Commonwealth Government provides export incentives through the Export Market Development Grants (EMDG) scheme. The scheme is designed to encourage Australian exporters to seek out and develop overseas markets for goods, specified services, industrial property rights and know-how which are substantially of Australian origin.

#### **Overseas Trade Publicity Committee**

The EMDG scheme provides financial assistance in the form of taxable cash grants of 70% of eligible expenditure. The maximum grant entitlement is \$200,000 in a grant year which is subject to an export earnings requirement in the third grant year awards. The scheme is administered at present by the Export Development Grants Board.

#### **Promotion of high technology products and services**

The Department of Trade is continuing the special promotion of exports of high technology products and services. Displays and prestige publications as well as a catalogue of Australian technology have been produced for use by Trade Commissioners and in general promotion.

Specialised Trade Commissioners are also being appointed to stimulate exports of selected advanced technology products and services (e.g. telecommunications, professional and scientific services).

## **Government authorities**

#### **Australian Trade Commission**

The Minister for Trade has announced that the functions of the Export Finance and Insurance Corporation, the Australian Overseas Projects Corporation and the Export Market Development Grants Board together with the marketing functions of the Trade Commissioner service and a large element of the existing Department of Trade will be amalgamated into a new Australian Trade Commission. The new commission is expected to commence operations from 1 January 1986. The government authorities described below will continue to operate until that time.

#### **Export Finance and Insurance Corporation**

The Export Finance and Insurance Corporation (EFIC) was established by the Commonwealth Government in 1975 to provide Australian exporters with a specialised range of insurance, guarantee, indemnity and finance facilities not normally available from commercial sources. The EFIC took over the functions of the Export Payments Insurance Corporation which had been operating since 1956.

#### **Australian Overseas Projects Corporation**

The Australian Overseas Projects Corporation was established in November 1978 as a statutory authority of the Commonwealth Government to encourage the export of Australian goods and services. Its prime objective is to assist Australian consultancy and construction organisations to compete for contracts for overseas development projects, particularly those which are beyond the resources of individual firms and require a turnkey or multi-disciplinary approach, or require a government-to-government involvement. The Corporation's major functions are, on request, to act as prime contractor, consortium member or agent on behalf of Australian organisations. The Corporation also serves as a central point for dissemination of information on overseas project opportunities.

## Trade relations

### Trade policy

Australia is very reliant on international trade for its economic well-being. A substantial proportion of Australia's agricultural and mineral production is exported. Australia is a major world exporter of a range of commodities including coal, iron ore, bauxite, alumina, manganese, mineral sands, wool, meat, wheat and sugar. Imports, particularly capital equipment, play a vital role in the country's economic development. Consequently, Australia is dependent on a stable international trade and payments system to secure its general trading objectives.

Australia's fundamental trade policy objectives include:

- the maintenance of an open international trade and payments system
- the maintenance of an equitable framework of rules based on the principles of multilateralism, non-discrimination, predictability and transparency, and which provides for progressive trade liberalisation
- in relation to agricultural trade, fair and predictable access to major markets, restraints on subsidised competition in third markets and stability in commodity markets
- the maintenance of secure and stable markets for minerals and assistance in obtaining stable and remunerative prices for mineral exports
- the promotion of employment through increased exports and in particular increased exports of manufacturers

### General Agreement on Tariffs and Trade

The General Agreement on Tariffs and Trade (GATT) is a multilateral treaty which provides the main framework of rules for the conduct of world trade. It also provides a forum in which countries can discuss and seek to overcome their trade problems as well as negotiate to enlarge world trading opportunities. The aim of the GATT is to liberalise world trade and place it on a secure basis, thereby contributing to economic growth and development.

The GATT has been provisionally applied since January 1948 by the contracting parties pursuant to the protocol of provisional application. Australia was one of the original signatories to the protocol. By July 1985 GATT membership had reached 90, with an additional 31 countries applying GATT rules on a de facto basis.

A number of rounds of multilateral trade negotiations have taken place within the GATT framework, the most recent of which was the Tokyo Round (1973–1979). Concessions negotiated by member countries are incorporated in their 'Schedules of Concessions' which form an integral part of each country's obligations under the GATT. These concessions generally involve commitments not to increase tariffs on specific products above specified levels. The Tokyo Round negotiations also resulted in a number of agreements on non-tariff measures which clarified and expanded the existing rules of the GATT. These agreements included codes of conduct on subsidies and countervailing duties, government procurement, customs valuation, standards, import licensing, anti-dumping, trade in civil aircraft and a group of texts under the heading 'Framework for the Conduct of International Trade'. The latter includes texts which deal with reciprocity, more favourable treatment and fuller participation by developing countries, trade measures for balance of payments purposes, safeguard action for development purposes, consultation, dispute settlement and surveillance. There are also arrangements relating to bovine meat and dairy products.

All major developed countries have acceded to most of these agreements and Australia, as a member intends to accede to those on customs valuation, anti-dumping, import licensing, standards, subsidies, countervailing duties, the Framework texts and the arrangements on bovine meat and dairy products.

An important aspect of the GATT work is to oversee the application of the trade rules established under its auspices. The main features of the General Agreement are:

- trade without discrimination; the guarantee of most-favoured-nation tariff treatment to all Contracting Parties
- agreement on commercial policy rules for international trade, including restrictions on the use of subsidies and quantitative restrictions
- provision of mechanisms for consultations and dispute settlement
- safeguard, or emergency protection, provisions, enabling countries to apply temporary measures to industries seriously threatened by imports
- special recognition of the needs and capabilities of developing countries

The highest body of GATT is the Session of Contracting Parties which usually meets annually. GATT decisions are generally arrived at by consensus, rather than vote, though

two-thirds majority votes are required for the granting of 'waivers', (authorisations for members to depart from specific GATT obligations). Between Sessions of the contacting parties the Council of Representatives is authorised to act on both routine and urgent matters. The Council meets about six times a year.

In 1975 a Consultative Group of 18 comprising high level officials from key member countries was established to operate essentially as an executive steering group to assist GATT members carry out some of their major responsibilities more effectively.

The Committee on Trade and Development (CTD) reflects the GATT's increased focus on the problem of developing countries and has the duty of following all activities of GATT to ensure that problems of concern to developing countries are given priority attention. The CTD was formed after the introduction, in 1965, of Part IV of GATT which embodies commitments to individual and joint action by Contracting Parties, aimed at ensuring that the developing countries can increasingly find the means to raise living standards and promote rapid economic development through increased participation in international trade. This commitment has been elaborated by the Framework agreement enabling differential and more favourable treatment of developing countries, as a permanent legal feature of the world trading system.

A number of committees have been established to supervise implementation of the Tokyo Round agreements, and the progress of the GATT Work Program established by the 1982 Ministerial level session. These include the Committees on Trade in Agriculture, anti-dumping, subsidies and countervailing duties, safeguards, quantitative restrictions and other non-tariff measures, budgets and finance. Others supervise the functioning of arrangements on textiles (the Multifibre Arrangement) meat and dairy products, payments purposes, multi-fibre arrangements, anti-dumping practices and financial/administrative questions. Working parties are set up to deal with current questions, such as requests for accession, verification that agreements concluded by members are in conformity with GATT and to investigate disputes.

The developed country contracting parties to the GATT have introduced tariff preferences for developing country products under the Generalised System of Preferences (GSP).

The Australian System of Tariff Preferences for Developing Countries, in common with those of other donors, is a unilateral, non-reciprocal and non-contractual provision of specified preferential tariff advantages. Accordingly, Australia reserves the right at any time to modify, withdraw, suspend or limit the preferential treatment for any item or with respect to any beneficiary.

Australia's system of tariff preferences was introduced in 1966 (the first in the world) and has since been substantially revised and expanded through reviews in 1974, 1976 and 1979. On 1 January 1981 the system was further extended to include most textile, clothing and footwear products. Most dutiable manufactured and substantially processed primary products are now covered by the system. Margins of preference offered under the system are generally 10 to 15 per cent below the General Tariff rate. The system is currently undergoing a further major review by the Government.

The system is designed to assist developing countries to overcome their disadvantages in competing with other countries in the Australian market, providing always that such imports do not cause or threaten injury to Australian industry. A range of products where developing countries generally are already competitive on the Australian market are excluded from the system and preferences on a number of additional products have been withdrawn because of disruption to local industry. In some cases specific beneficiaries have been excluded from a preference.

Proposals for the addition or withdrawal of products from the system are to be referred to the Industries Assistance Commission for inquiry and report, usually within 45 days. This procedure gives all interested parties the opportunity to submit their views in evidence to a public inquiry.

### **Bilateral arrangements**

*West Europe*—Although the European Community (EC) has formal trading arrangements with a large number of countries providing either free trade or preferential treatment, no such arrangement has been concluded with Australia.

In recent years Australia has experienced a large and growing trade deficit with the EC which has reflected an imbalance of trading opportunities. In the context of the Multilateral Trade Negotiations, finalised in 1979, Australia was able to negotiate with the EC improved

access into Community markets for a number of agricultural products. However the benefits Australia expected to receive from these arrangements have not been fully realised due to EC policies.

Consideration by the Community of proposals for reform of the Common Agricultural Policy (CAP) is expected to be completed towards the end of 1985. Australia has presented a submission on CAP reform to the Community as part of the review. The Bureau of Agricultural Economics also published a major study of EC agricultural policies in August 1985.

While the bilateral relationship has been overshadowed by the operations of the CAP and agricultural issues, there is significant potential for developing Australia's role as a supplier of minerals and energy to the EC and in attracting increased European investment to resource based development projects in Australia.

The Government has indicated that it wishes to pursue a more constructive approach in order to improve the relationship with the EC. Formal consultations on a wide range of trade and trade-related issues were held between Australian Ministers and the EC Commission in Canberra in March 1984 and in Brussels in June 1985.

### Trade agreements

#### Asia

*People's Republic of China*—signed 1973. The Agreement provides, inter alia, for reciprocal most favoured nation treatment for imports, while recognising the preferential arrangements extended by both countries. The Agreement includes schedules of goods which each country is interested in exporting to the other. It also provides that exchanges of goods and technical services under contracts and agreements will be at reasonable international market prices; that payments in relation to trade will be in freely convertible currency; and that each country will promote the inter-change of trade representatives, groups, and delegations, and encourage the commercial exchange of industrial and technical expertise. The Agreement also established a Joint Trade Committee to further the aims of the Agreement. A protocol on Economic Co-operation to the Trade Agreement was signed in September 1981. The Protocol has the objective of notifying to enterprises and organisations of the two countries that their Governments have agreed on a range of industry and industry sectors regarded as holding prospects for co-operation between the two countries, and the form in which co-operation projects may be implemented. In 1984 an Agreement on Economic and Technical Co-operation in the iron and steel industry between Australia and China was signed. The main objective of the Agreement is to facilitate and promote economic and technical co-operation in trade in raw materials, iron and steel and related products, equipment and services, technology transfer and training.

*Japan*—signed 1957. The current Agreement on Commerce between Australia and Japan was initially signed in 1957, amended in 1963 and formally ratified on 27 May 1964. It provides for reciprocal most favoured nation treatment of imports while recognising the preferential arrangements of both countries; for certain commitments by Japan in regard to some important Australian export commodities including wool, soft wheat, sugar, canned meat, leather, butter and cheese; and for equal opportunity for Japanese products in relation to Commonwealth Government purchases from suppliers overseas. It also provides for close consultation between the two countries on matters relating to trade.

*Republic of Korea*—signed 1975. The current Agreement replaced an earlier Agreement entered into by Australia and the Republic of Korea in 1965. The present Agreement states that the two governments are to take all appropriate measures to facilitate, strengthen, and diversify bilateral trade in accordance with the General Agreement on Tariffs and Trade; recognises the need to improve the conditions of world commodity trade; declares support in principle for international commodity agreements, and expresses support in principle for the conclusion of long-term commercial contracts between organisations and enterprises of the two countries. The Agreement also established a Joint Trade Committee to further the aims of the Agreement.

*Philippines*—signed 1975. The current Agreement replaces an earlier Agreement entered into in 1965. Provides, inter alia, for reciprocal most favoured nation treatment of imports from either country; recognises preferential agreements of both countries; encourages Australian investment and joint ventures in the Philippines. Provides for a Joint Commission to meet annually, or more frequently if required. The Agreement entered into force in May 1979.

*Thailand*—signed 1979. Provides inter alia, for strengthening and diversification of bilateral trade; supports trading arrangements among ASEAN countries; supports international commodity agreements; encourages economic, commercial and industrial co-operation, including investment in Joint Ventures. Provides for a Joint Trade Committee to meet annually or as required.

*Socialist Republic of Vietnam*—signed in 1974. Provides, inter alia, for reciprocal most favoured nation treatment for imports and expresses support for the principle of long-term commercial contracts.

*Indonesia*—signed 1972. The current Agreement replaced an earlier Agreement signed in 1959. It provides, inter alia, for reciprocal most favoured nation treatment of imports; expresses support for trade initiatives and arrangements among member countries of the Association of South East Asian Nations (ASEAN); declares support in principle for international commodity agreements and encouragement for Australian commercial investment in Indonesia and provides for consultations as required on trade matters.

*Malaysia*—signed 1958. The Agreement provides for each country to accord preferences to the other on certain specified goods. The exchange of these preferences was placed on a more flexible basis by an Exchange of Letters on 21 February 1975. The Agreement further provides for protection of Malaysia's tin and rubber exports to Australia and of Australia's wheat exports to Malaysia against dumped or subsidised competition. The agreement also assures Malaysia that Australia tariff or import licensing treatment of natural rubber will be the same as for synthetic rubber.

### **Pacific**

*New Zealand*—The Closer Economic Relations Trade Agreement, which came into operation on 1 January 1983, is designed to complete the process to free trade between Australia and New Zealand which was commenced under the New Zealand Australia Free Trade Agreement. Remaining tariffs and quantitative restrictions on goods traded between Australia and New Zealand are to be progressively eliminated by 1995 at the latest under conditions of fair competition.

The Agreement also addresses other factors affecting trans-Tasman trade such as export incentives, government purchasing and investment policies, and provides a framework for the harmonisation of matters such as standards, technical specifications and restrictive trade practises. A general review of the operation of the Agreement is scheduled for 1988.

*Papua New Guinea*—The Papua New Guinea-Australia Trade and Commercial Relations Agreement (PATCRA) which came into force in February 1977 provides, inter alia, that subject to certain exceptions, trade between Australia and Papua New Guinea shall be free of duties and other restrictions. From 1 January 1987, all Papua New Guinea products will enter Australia on a duty-free unrestricted basis except for those covered by Australian sectoral policies i.e.: steel, sugar, textiles clothing and footwear and passenger motor vehicles.

*Pacific Islands*—The South Pacific Regional Trade and Economic Co-operation Agreement (SPARTECA) which came into force in January 1980 provides, inter alia, that Australia will progressively provide duty free and unrestricted access for as wide a range of Forum Island Country (FIC) products as possible. From 1 January 1987, all FIC products will enter Australia on a duty-free unrestricted basis except for those covered by Australian sectoral policies.

### **Americas**

*Canada*—signed 1960. The Canada/Australia Trade Agreement (CANATA) was updated by an Exchange of Letters in 1973 to incorporate preferences derived from Australia's Trade Agreement with the United Kingdom and to provide greater flexibility in the administration of preferential tariff arrangements.

*Brazil*—signed 1978. The Agreement represented a significant development in strengthening trade and economic links between Australia and Brazil. It basically confirms GATT rights and obligations and emphasises industrial co-operation including investment. A significant feature is the ten year initial life of the Agreement to cover long term commodity contracts. It also establishes a Joint Consultative Committee.

### **Europe**

*East Europe*—The development of Australia's trade relations with the countries of East Europe began as part of a policy of market diversification in the mid-1960s. Since 1965 Australia has signed trade agreements with Yugoslavia and all East European centrally planned economies (CPEs), except Albania.

Australia's trade agreement with the USSR (signed in 1965) provides for reciprocal most favoured nation (MFN) treatment. A supplementary agreement on the Development of Trade and Economic Relations was signed in 1973. This agreement provides for the encouragement and facilitation of trade; industrial and technical co-operation; support for international commodity agreements; and the establishment of a Mixed Commission on Trade and Economic Co-operation to meet once in every two years. At the third session of the Mixed Commission in 1976, a Working Group on Trade in Machinery and Equipment was established to promote two-way trade in machinery and equipment. In 1983/84, committees comprising Commonwealth and State officials and businessmen were established in each of New South Wales, Queensland, Victoria and Western Australia to advise on the development of Australia/USSR trade.

Australia's trade agreement with Yugoslavia (signed in 1970) provides for mutual exchange of MFN treatment under the GATT and mutual encouragement of economic and technical co-operation. The agreement does not provide for meetings of a Mixed Commission but there is provision for consultations upon request.

Australia's trade agreements with Poland (signed in 1966, with a supplementary agreement signed in 1978), Czechoslovakia (signed in 1972), German Democratic Republic (GDR) (signed in 1974 with a supplementary protocol signed in 1977), Hungary and Bulgaria (both signed in 1974) and Romania (signed in 1975) are all broadly similar in their provisions. All of the agreements provide for the establishment of, and regular meetings of (usually every two years) a Mixed Commission or Joint Trade Committee; and either confirm reciprocal MFN treatment, as in the trade agreements with the GDR and Bulgaria; or acknowledge that trade will be in accordance with the rights and obligations of both countries under GATT, as in the trade agreements with Czechoslovakia, Hungary, Poland and Romania. The agreements also provide for the encouragement and facilitation of trade, and industrial and technical co-operation, and the negotiation of long term commercial contracts as well as support for international commodity agreements.

#### *Other Europe*

*Cyprus*—signed 1983. This agreement provides a basis for the strengthening and diversification of trade and encouragement and facilitation of commercial and technical co-operation between Australia and Cyprus.

*Italy*—an Economic and Commercial Co-operation Agreement was signed in 1984. This agreement provides for the continuing expansion of mutually beneficial economic and commercial relations between Australia and Italy.

#### **Middle East**

*Bahrain*—The Agreement on Trade, Economic and Technical Co-operation was signed in May 1979. The Agreement expresses the intention of the two Governments to develop and expand trade and economic relations by the establishment of a Joint Committee, the facilitation of joint ventures in the two countries, and encouraging the exchange of technology and technical expertise between commercial enterprises.

*Iraq*—The Agreement on Trade, Economic and Technical Co-operation was signed in March 1980. The Agreement provides, inter alia, for the exchange of most favoured nation treatment between Australia and Iraq, encouragement of the negotiation of commercial contracts between relevant organisations and commercial enterprises and the establishment of a Joint Governmental Commission.

*Saudi Arabia*—The Agreement on Economic and Technical Co-operation was signed in March 1980 and provides for the facilitation of joint ventures in each country, encouraging the exchange of scientific and technological research, and the establishment of a Joint Commission.

*Oman*—signed 1981. The Agreement on Trade, Economic and Technical Co-operation expresses the intention of the two Governments to develop and expand trade and economic relations. Provides for the facilitation of joint ventures in the two countries and encourages the exchange of technology and technical expertise. The Agreement also established a Joint Commission.

*Kuwait*—signed 1982. The Agreement on Economic and Technical Co-operation expresses the intention of the two Governments to develop and expand trade and economic relations. Provides for the facilitation of joint ventures in the two countries and encourages the exchange of technology and technical expertise and establishes a Joint Committee.

### Others

*India*—signed 1976. The agreement confirms that trade between the two countries shall be conducted in accordance with the provisions of GATT. It provides for encouragement and co-operation between India and Australia and establishes a Joint Trade Committee to meet annually and review the operation of the Agreement and advance its objectives.

## Trade services

### Trade Commissioner Service

The stimulation of interest abroad in Australia's exports is an important government activity in which the Australian Trade Commissioner Service plays a prominent part. A brief account of the establishment and growth of the Trade Commissioner Service before the 1939-45 War is available in Year Book No. 51, page 496. Since the War the Service has increased steadily; by mid 1985 there was an establishment of 161 Trade Commissioners and Assistant Trade Commissioners in Australia and at 54 posts in 44 countries.

Trade Commissioners are responsible for providing commercial intelligence in their territories in the fields of manufactured goods, rural commodities, resources, energy and technical and allied services. Particular facilities provided for Australian exporters and export organisations include: surveying market prospects; advising on selling and advertising methods; arranging introductions with buyers and agents; providing reports on the standing of overseas firms; advising and assisting business visitors; helping to organise and carry through trade missions, trade displays, newspaper supplements, and other promotion and publicity media; providing information on import duties, import licensing, economic conditions, quarantine and sanitary requirements, and other factors affecting the entry and sales of goods and services and helping to attract desirable investment.

In some countries Trade Commissioners also participate in inter-governmental negotiations in the resources and commercial fields. In certain countries where there is no diplomatic or consular mission, Trade Commissioners are called upon to act as the Australian government representative.

Trade Commissioners and Assistant Trade Commissioners are drawn from both private enterprise and the public service. Applications for entry are invited periodically by public advertisement.

The Trade Commissioner Service is currently administered by the Department of Trade (as distinct from the diplomatic and consular services administered by the Department of Foreign Affairs), but in countries where there is an Australian diplomatic or consular mission it is the practice for Trade Commissioners to be attached to that mission and to hold an appropriate diplomatic or consular rank—Minister (Commercial), Counsellor (Commercial) or First or Second Secretary (Commercial).

In April 1985 the Minister for Trade announced the intention to establish the Australian Trade Commission (refer Government Authorities section, above). The Marketing functions of the Trade Commissioner Service are to be absorbed into the new Commission. The Department of Trade in the continuing administration of trade policy and overseas trade relations will administer a modified form of the *Trade Commissioners Act 1933*.

The countries where Australian Trade Commissioner posts are located are shown in the following list. Except where indicated the missions are located in capital cities only. Algeria; Argentina; Austria; Bahrain; Belgium; Brazil (Rio de Janeiro); Britain; Canada (Vancouver, Toronto, Ottawa); China, People's Republic, Beijing, Shanghai; Egypt, Arab Republic of; Fiji; France; Germany, Federal Republic of; Hong Kong; India; Indonesia; Iran; Iraq; Israel; Italy (Rome, Milan); Japan (Tokyo, Osaka); Kenya; Korea, Republic of; Kuwait; Malaysia; Mexico; Netherlands; New Zealand (Wellington, Auckland); Papua New Guinea; Philippines; Saudi Arabia (Jedda, Riyadh); Singapore; South Africa (Johannesburg); Spain; Greece; Sweden; Switzerland (Geneva); Thailand; United Arab Emirates; United States of America (Washington DC, Chicago, Houston, Los Angeles, New York, San Francisco); U.S.S.R.; Venezuela; Yugoslavia, Socialist Federal Republic of.

Full details of the Australian Trade Commissioner posts are available from the Department of Trade, Canberra, A.C.T. 2600.

### Australian Trade Correspondents and Marketing Officers

Detached Australian Trade Correspondents and Marketing Officers supplement the work of the Trade Commissioner in whose territory they are located. Correspondents are situated in various locations throughout the world.

### Trade representation in Australia

Details of Trade Representatives in Australia are available from the Department of Foreign Affairs, Canberra, A.C.T. 2600.

## Collection and presentation of statistics

### Source of data

Foreign trade statistics are compiled by the Australian Bureau of Statistics from documentation submitted by exporters and importers or their agents to the Australian Customs Service as required by the Customs Act.

### Scope of the statistics

The statistics presented below are, with one exception, recorded on a *general trade* basis, i.e., total exports include both Australian produce and re-exports, and total imports comprise goods entered directly for home consumption together with goods imported into bonded warehouses. The statistics of import clearances, however, are recorded on a *special trade* basis, i.e., clearances comprise goods entered directly for home consumption together with goods cleared into the home market from bonded warehouses.

*Exports of Australian produce* are goods, materials or articles which have been produced, manufactured or partly manufactured in Australia, except goods which were originally imported and have undergone only repair or minor operations which leave them essentially unchanged.

*Re-exports* are goods, materials or articles originally imported which are exported either in the same condition in which they were imported or after undergoing repair or minor operations which leave them essentially unchanged. Minor operations include blending, packaging, bottling, cleaning, sorting, husking or shelling.

*Total exports* are the aggregate of exports of Australian produce and re-exports.

The following are excluded from recorded trade statistics:

- (a) direct transit trade, i.e., goods being trans-shipped or moved through Australia for purposes of transport only;
- (b) migrants' and passengers' effects exported or imported; and parcels post exports and imports of small value, for which Customs entries are not required;
- (c) certain materials under inter-governmental agreements for defence and similar projects for which Customs entries are not required;
- (d) vessels and aircraft engaged in the transport of passengers or goods between Australia and other countries;
- (e) the sale or purchase of any vessel and/or aircraft intended for use on overseas routes;
- (f) fish and other sea products landed in Australia or abroad directly from the high seas by Australian vessels;
- (g) entries lodged on informal clearance documents (ICD) for values not exceeding \$250;
- (h) export consignments where the value of the goods in each transaction is less than \$250.

and for imports only;

- (i) bunkers and stores supplied to vessels and aircraft prior to arrival in Australia.

*Exports ships' and aircraft stores.* Prior to July 1982 bunkers and stores supplied to foreign owned vessels and aircraft prior to departure overseas were excluded from export statistics but were published separately as ships' and aircraft stores statistics. The United Nations Statistical Commission has recommended (International Trade Statistics, *Concepts and Definitions*, United Nations Statistical Papers, Series M, No. 52, Revision 1, 1982) that such bunkers and stores be included in total exports statistics. Accordingly, commencing with July 1982 statistics, these commodities have been classified according to the appropriate AECC items. As a result, from July 1982 total export statistics and commodity statistics which include stores for foreign ships and aircraft are not strictly comparable with data for earlier periods.

### Statistical period

*Exports.* Exports are recorded statistically in the month the entries are lodged with the Australian Customs Service. Regular exporters or their agents may provide details of their export shipments on a periodic rather than an individual shipment basis by submitting weekly or monthly returns. These 'periodic returns' must be submitted to the Australian Customs



Service within seven days of the end of the period in question covering all shipments during that period. All other exporters are required to report each individual shipment prior to the ship's departure. Approximately 90 per cent of monthly export values are recorded on periodic returns. The statistical month for Customs outports (generally ports other than those at which the main Customs Office in each State is located) closes on the twenty-first of each month, whereas for mainports the statistical month is the calendar month. Because of these factors export statistics for a particular month do not necessarily represent all of the commodities actually exported during that month. Analysis of past data has shown that in aggregate approximately 30 per cent of export trade by value for a particular month reflects actual shipments during that month, 60 per cent by value was actually exported during the previous month with the remaining 10 per cent by value exported in earlier months. For individual commodities the percentage by value representing actual exports in a month may vary considerably.

*Imports.* Imports are recorded statistically in the calendar month in which the import entries were both finalised by the Australian Customs Service and passed to the ABS for further processing. Import entries may be lodged early using the check-to-arrive system or the documents may be delayed because of various validation checks carried out by Customs prior to the entries being passed to the ABS. Import statistics for a particular month do not necessarily represent entries lodged or commodities actually imported during the month in question. Analysis of past data has shown that in aggregate approximately 70 per cent of import trade by value recorded for a particular month was actually imported during that month, 25 per cent was actually imported during the previous month with the remaining 5 per cent being imported in earlier months. For individual commodities the percentage by value representing actual imports in a month may vary considerably.

#### **State**

From 1 July 1978, *State* statistics for exports comprise State of origin of Australian produce and State of final shipment of re-exported goods. State of origin is defined as the State in which the final stage of production or manufacture occurs. Previously *State* was the State in which the export document was lodged with the Australian Customs Service. Because of this change, figures from 1 July 1978 are not directly comparable with those for previous periods.

For imports the State is that in which the import entry was lodged with the Australian Customs Service. The port of lodgement of the import entry is not necessarily the port of discharge of the goods. Goods forwarded interstate after import, whether in containers or not, are recorded as being imported at the port of lodgement of the import entry.

#### **Valuation**

*Exports.* Goods actually sold to overseas buyers prior to shipment are valued at the free-on-board (f.o.b.) Australian port of shipment equivalent of the actual price at which the goods were sold. Goods shipped on consignment are valued at the f.o.b. Australian port of shipment equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods are despatched for sale. The recorded value of exports includes the value of the outside package, other than international containers used for containerised cargo.

*Imports.* The recorded value of imports is the customs value (formerly referred to as the value for duty). On 30 November 1981, Australia changed its system of valuation from the Brussels Definition of Value (BDV) to the GATT Agreement on Customs Valuation. The Agreement reflects one of a number of trade related codes of conduct established during the round of Multi-lateral Trade Negotiations (MTN) concluded in 1979. The GATT Agreement differs from the Brussels Definition of Value in that it offers a set of practical rules on the valuation of imports rather than a list of conceptual guidelines. Under the Agreement the primary basis for establishing the customs value is the price actually paid or payable, provided a number of conditions are met. The most important condition is that the buyer and seller must be independent of each other. If the conditions are not met the practical rules are used to determine the customs value. The recording of the value of imports remains on a free-on-board (f.o.b.) basis (i.e. the charges and expenses involved in delivering the goods from the place of exportation to Australia are excluded). The recorded value also continues to include the value of outside packages, other than international containers used for containerised cargo. The change in the basis of valuation is expected to have a negligible effect on value and duty import statistics. For details of the method of valuation used prior to 30 November 1981, see Year Book No. 66, page 633.

### Merchandise exports and imports

In accordance with standards recommended by the United Nations: Merchandise exports are defined as all goods which subtract from the stock of material resources in Australia as a result of their movement out of the country. Merchandise exports, therefore, exclude goods exported with the reasonable expectation of re-import within a limited time. A complete list of commodities not included in merchandise trade is shown under section 9 (b) of the *Australian Export Commodity Classification* (AECC) (1203.0). These include, for example, coin being legal tender and goods for temporary exhibition outside Australia.

Merchandise imports are defined as all goods which add to the stock of material resources in Australia as a result of their movement into the country. Merchandise imports, therefore, exclude goods imported with the reasonable expectation of re-export within a limited time. A complete list of commodities not included in merchandise trade is shown under Section 9 (b) of the *Australian Import Commodity Classification* (AICC) (1204.0). These include, for example, coin being legal tender and goods for temporary exhibition in Australia.

Goods excluded from merchandise trade are for convenience termed non-merchandise and such trade is shown separately in some tables. Total trade is the sum of merchandise and non-merchandise.

Classification changes affecting the levels of merchandise and non-merchandise trade were introduced on 1 July 1983, in accordance with recommendations of the United Nations Statistical Commission (International Trade Statistics, *Concepts and Definitions*, United Nations Statistical Papers, Series M, No. 52, Revision 1, 1982). As a result, statistics of exports and imports, from July 1983, under sections 9 (a) and 9 (b) of the AECC and AICC are not comparable with previous years. The changes do not affect Sections 0 to 8 of the classifications, nor total trade. Further information about the changes was given in the 1983-84 editions of the AECC and AICC, or may be obtained from the ABS Trade and Shipping Section in Canberra.

### Commodity classification

Exports and imports are classified according to the items of the AECC and AICC respectively, which, from 1 July 1978, have been based on the *Standard International Trade Classification*, Revision 2 (United Nations Statistical Papers, Series M, No.34, Revision 2, 1975). Copies of, or extracts from these classifications may be obtained from offices of the ABS in Canberra and in each capital city.

### Australian Standard Commodity Classification

The Australian Standard Commodity Classification (ASCC) has been developed by the ABS to enable users to compare statistics of commodities produced in Australia with statistics of commodities imported and exported.

The ASCC manual (1207.0 and 1208.0) links production, import and export items at their most detailed level of comparability in the form of standard (ASCC) commodity items. In a large number of cases, however, due to the differences between production, import and export items, comparability is only achieved at fairly broad aggregate levels. In the ASCC, commodities are grouped under industries (as defined in the Australian Standard Industrial Classification (ASIC)) in which they are typically produced. (Refer Chapter 17, Manufacturing and Internal Trade).

### ASIC industry of origin

Export and Import statistics are classified according to Subdivisions of the *Australian Standard Industrial Classification* (ASIC). The statistics are compiled by allocating statistical items of the AECC and AICC to the ASIC industry of origin with whose main economic activities the commodities are primarily associated. A full description of ASIC classes is contained in the publication *Australian Standard Industrial Classification*, Vol. 1—*The Classification* (1201.0).

### Broad economic categories

Exports and Imports of merchandise are classified according to the nineteen categories of the United Nations classification, *Broad Economic Categories* (BEC). The BEC attempts to classify foreign trade statistics for the purposes of general economic analysis according to the main end use of the commodities traded.

**Country**

A country is defined as a geographical entity which trades, or has the potential to trade, with Australia in accordance with Australian Customs provisions. External territories under Australian administration *are* treated separately whilst self-governing territories and dependant territories under the administration of other countries *may* be treated as individual countries in Australian foreign trade statistics. *Exports*: for exports, *country* refers to the country to which the goods were consigned at the time of export. Where the country of consignment is not determined at the time of export, goods are recorded as exported *For orders* and in those cases where it was found to be impossible to determine the destination, as *Destination unknown*. *Imports*: for imports, *country* refers to the country of origin of the goods which is defined as the country of production for Customs purposes.

**Quantity data**

Where quantities are shown they are generally expressed in terms of the normal unit of quantity used in the appropriate industry and as specified in the AECC and AICC published by the ABS. Quantities are not tabulated in respect of statistical items for which there is no appropriate unit of quantity (e.g. a statistical item which covers a number of commodities that cannot be recorded under a single unit of quantity).

**Excess of exports or imports**

The excess of the value of exports or imports does not represent the balance of trade. The balance of trade is the excess of exports or imports on a *balance of payments* basis. Details of the adjustments (relating to coverage, timing and valuation) made to total recorded exports and imports for balance of payments purposes, are set out in the annual publication *Balance of Payments, Australia* (5303.0). Some information may be found in the section relating to the balance of payments.

**Treatment of confidential data**

To ensure that information about the activities of particular businesses is not disclosed it is necessary to restrict the release of statistics of certain commodities. These restrictions do not affect total export or import figures but they can affect statistics at all levels of the Australian Export and Import Commodity Classifications.

**Foreign trade statistics****Total foreign trade**

The following table shows the total trade of Australia with foreign countries from 1979-80 to 1984-85.

**FOREIGN TRADE**

(\$m)

<i>Year</i>	<i>Exports</i>	<i>Imports</i>	<i>Excess of exports (+) or imports (-)</i>
1979-80. . . . .	18,871	16,218	+ 2,653
1980-81. . . . .	19,177	18,965	+ 212
1981-82. . . . .	19,575	23,005	- 3,430
1982-83. . . . .	22,123	21,806	+ 317
1983-84. . . . .	24,781	24,061	+ 720
1984-85 (p) . . . . .	30,640	30,026	+ 614

The following table shows particulars of merchandise and non-merchandise trade for recent years.

**MERCHANDISE AND NON-MERCHANDISE TRADE**

(\$m)

**EXPORTS**

<i>Year</i>	<i>Merchandise</i>	<i>Non-merchandise</i>	<i>Total</i>
1979-80. . . . .	18,606	265	18,871
1980-81. . . . .	18,949	228	19,177
1981-82. . . . .	19,294	281	19,575
1982-83. . . . .	21,456	667	22,123
1983-84. . . . .	24,029	752	24,781
1984-85 (p) . . . . .	29,804	831	30,640

**IMPORTS**

<i>Year</i>	<i>Merchandise</i>	<i>Non-merchandise</i>	<i>Total</i>
1979-80. . . . .	16,045	173	16,218
1980-81. . . . .	18,790	175	18,965
1981-82. . . . .	22,777	228	23,005
1982-83. . . . .	21,263	543	21,806
1983-84. . . . .	23,541	520	24,061
1984-85 (p) . . . . .	29,056	970	30,026

Diagrams on the following pages show the foreign trade of Australia, 1962-63 to 1984-85 and the value of exports and imports, proportions by country, 1980-81 to 1984-85.

FOREIGN TRADE 1962-63 TO 1984-85

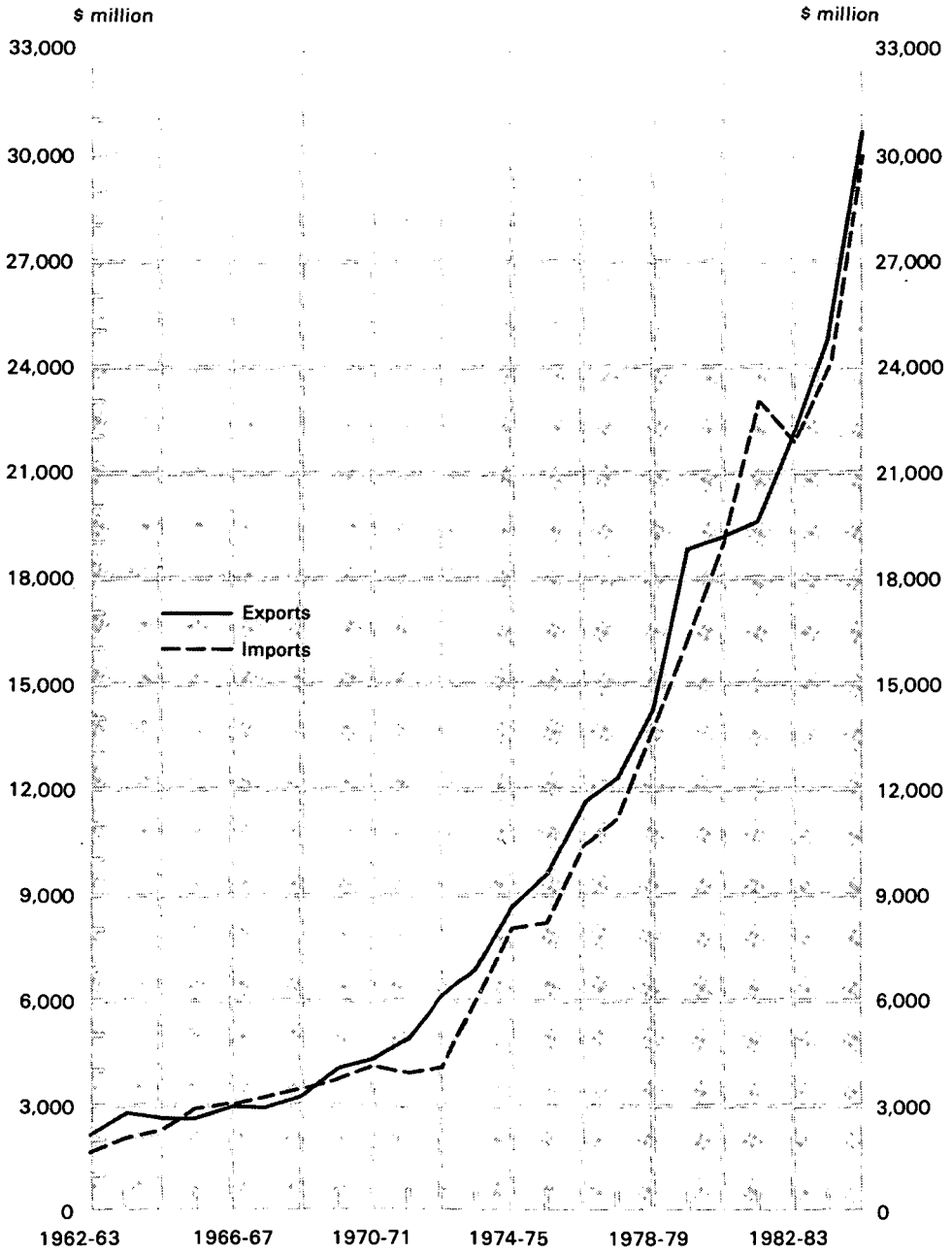
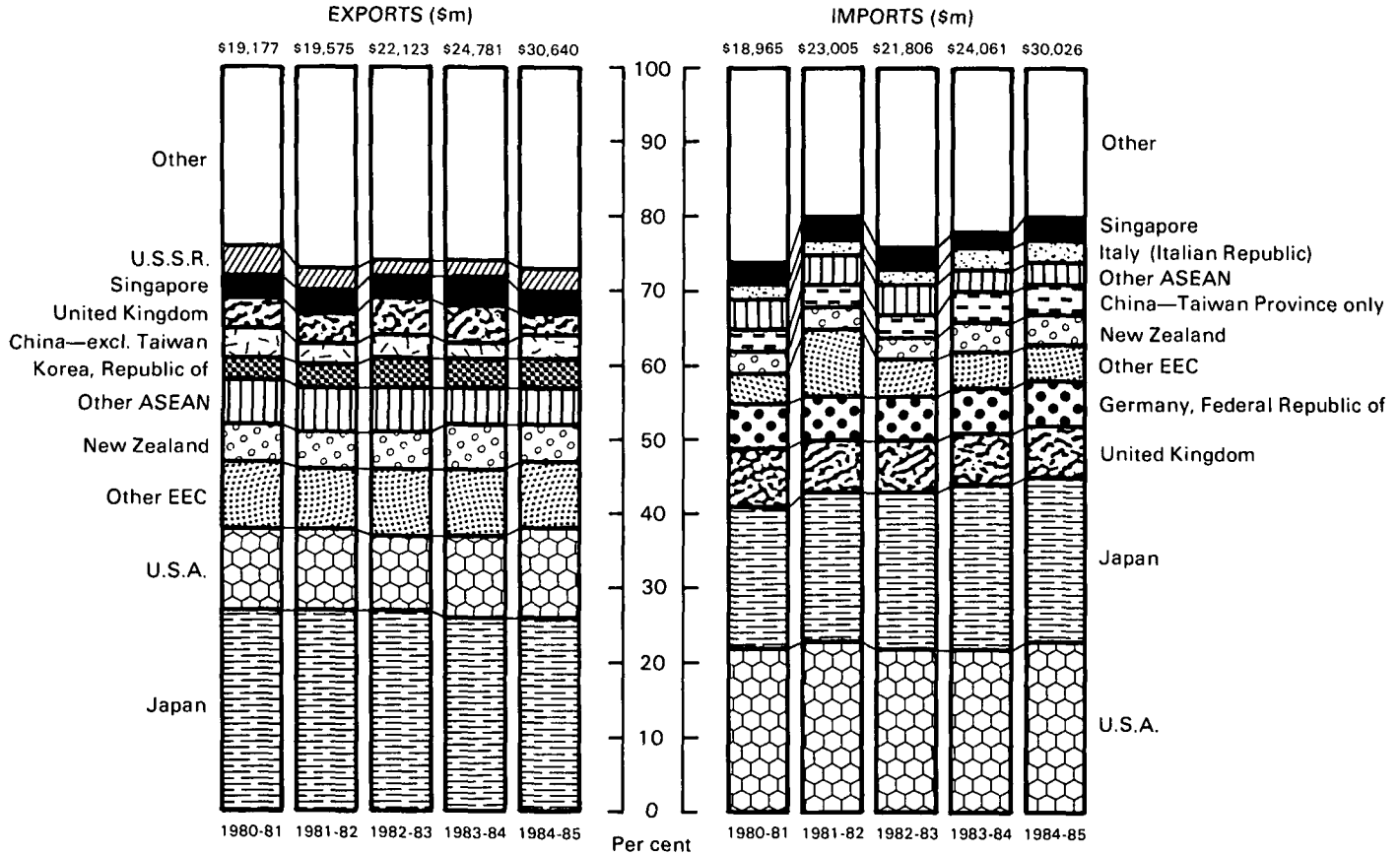


PLATE 44

VALUE OF EXPORTS AND IMPORTS, AUSTRALIA, PROPORTIONS BY COUNTRY, 1980-81 TO 1984-85

PLATE 45



FOREIGN TRADE

### Classified summary of Australian foreign trade

The following table shows exports and imports according to divisions of the Australian Export and Import Commodity Classifications (based on the *Standard International Trade Classification* Revision 2).

#### EXPORTS AND IMPORTS: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS

(\$'000)

Division No.	Description	Exports			Imports		
		1982-83	1983-84	1984-85(p)	1982-83	1983-84	1984-85(p)
00	Live animals . . . . .	235,106	249,037	248,458	27,509	36,647	39,782
01	Meat and meat preparations . . . . .	1,677,605	1,393,941	1,374,266	14,731	13,987	20,163
02	Dairy products and birds' eggs . . . . .	329,445	367,644	418,522	58,684	67,915	69,042
03	Fish, crustaceans and molluscs, and preparations thereof . . . . .	357,914	397,168	402,786	216,410	260,412	304,109
04	Cereals and cereal preparations . . . . .	1,918,355	2,704,046	4,138,824	38,261	46,840	60,088
05	Vegetables and fruit . . . . .	239,709	226,230	259,820	170,122	224,771	281,552
06	Sugar, sugar preparations, honey . . . . .	581,107	647,962	610,568	14,496	17,746	23,668
07	Coffee, tea, cocoa, spices, and manufactures thereof . . . . .	36,273	38,617	37,955	218,147	264,489	344,412
08	Feeding stuff for animals (not including unmilled cereals) . . . . .	64,530	101,022	121,302	38,980	29,769	40,423
09	Miscellaneous edible products and preparations . . . . .	17,478	22,276	26,629	38,182	52,621	63,154
11	Beverages . . . . .	52,154	58,660	57,262	100,471	105,758	137,901
12	Tobacco and tobacco manufactures . . . . .	14,503	14,608	14,667	83,336	90,362	87,481
21	Hides, skins and furskins, raw . . . . .	232,437	268,765	322,420	2,452	3,228	3,121
22	Oil seeds and oleaginous fruit . . . . .	10,320	15,063	31,290	15,316	23,006	18,216
23	Crude rubber (including synthetic and reclaimed) . . . . .	2,471	3,174	1,929	47,201	62,780	72,195
24	Cork and wood . . . . .	183,210	220,462	223,392	164,163	227,661	325,760
25	Pulp and waste paper . . . . .	3,151	4,110	10,399	81,554	98,119	100,493
26	Textile fibres and their wastes (other than wool tops) (not manufactured into yarn or fabric) . . . . .	1,926,423	2,056,218	2,617,009	76,399	103,605	120,965
27	Crude fertilisers and crude minerals (excluding coal, petroleum and precious stones) . . . . .	98,397	122,538	144,558	197,099	171,595	204,554
28	Metalliferous ores and metal scrap . . . . .	(a)3,753,334	(a)4,102,820	(a)4,598,749	16,509	17,972	23,228
29	Crude animal and vegetable materials, n.e.s. . . . .	53,393	53,865	59,240	47,716	54,311	63,967
32	Coal, coke and briquettes . . . . .	3,079,750	3,337,569	4,615,245	5,275	4,186	7,151
33	Petroleum, petroleum products and related materials . . . . .	1,152,914	1,429,337	2,395,145	3,092,463	2,212,672	2,292,476
34	Gas, natural and manufactured . . . . .	343,119	432,037	399,235	678	1,325	680
41	Animal oils and fats . . . . .	78,543	93,557	105,410	727	636	1,239
42	Fixed vegetable oils and fats . . . . .	1,765	5,001	9,975	49,094	62,925	57,112
43	Animal and vegetable oils, fats, and waxes of animal or vegetable origin . . . . .	6,835	6,878	8,595	31,687	47,399	53,723
51	Organic chemicals . . . . .	45,217	45,253	50,309	(b)468,238	(c)609,731	(d)672,316
52	Inorganic chemicals . . . . .	(e)39,079	(e)44,118	(e)63,265	232,419	(f)183,972	(g)189,208
53	Dyeing, tanning and colouring materials . . . . .	(h)20,296	(h)20,820	(h)25,315	78,008	101,328	115,504
54	Medicinal and pharmaceutical products . . . . .	108,418	118,515	122,068	193,356	221,258	293,908
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	33,744	38,357	39,987	106,108	134,086	170,319
56	Fertilisers, manufactured . . . . .	4,324	8,640	3,930	89,557	125,679	180,765
57	Explosives and pyrotechnic products . . . . .	8,142	7,576	7,630	9,299	15,777	25,400
58	Artificial resins and plastic materials, and products . . . . .	112,899	131,272	136,716	(i)364,293	(i)485,334	(i)568,504
59	Chemical materials and cellulose esters and ethers, n.e.s. . . . .	85,786	86,920	99,061	234,784	280,190	337,853
61	Leather, leather manufactures, n.e.s. and dressed furskins . . . . .	47,650	52,515	68,524	45,537	82,522	110,512
62	Rubber manufactures, n.e.s. . . . .	10,985	12,355	14,611	244,766	301,957	385,362
63	Cork and wood manufactures (excluding furniture) . . . . .	7,907	6,840	6,451	93,779	118,151	149,694
64	Paper, paperboard and manufactures, and articles of paper pulp, of paper or of paperboard . . . . .	46,760	53,961	68,694	484,069	615,564	838,302
65	Textile yarn, fabrics, made-up articles, n.e.s. and related products . . . . .	155,868	148,023	166,034	(j)1,011,395	(k)1,302,312	1,443,599
66	Non-metallic mineral manufactures, n.e.s. . . . .	110,141	153,405	123,672	(l)368,533	424,183	539,471
67	Iron and steel . . . . .	483,509	417,362	486,269	550,026	435,885	547,211
68	Non-ferrous metals . . . . .	1,251,504	1,548,269	1,869,515	93,370	98,064	123,394
69	Manufactures of metal, n.e.s. . . . .	178,158	204,606	175,767	(m)554,215	(n)605,707	(n)782,102

EXPORTS AND IMPORTS: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS—*continued*

(\$'000)

Division No.	Description	Exports			Imports		
		1982-83	1983-84	1984-85(p)	1982-83	1983-84	1984-85(p)
71	Power generating machinery and equipment	127,722	185,620	192,728	676,151	586,946	682,399
72	Machinery specialised for particular industries	179,316	179,087	175,506	(o)1,078,774	(o)1,151,589	(o)1,651,689
73	Metalworking machinery	28,812	30,529	28,235	174,220	145,694	222,587
74	General industrial machinery and equipment, n.e.s. and machine parts, n.e.s.	157,691	176,078	167,120	(q)1,151,660	(q)1,146,119	(q)1,382,153
75	Office machines and automatic data processing equipment	88,617	118,130	163,644	818,992	1,142,126	1,667,153
76	Telecommunications and sound recording and reproducing apparatus and equipment	71,814	51,381	59,003	808,025	965,951	1,167,124
77	Electrical machinery, apparatus and appliances, n.e.s. and electrical parts thereof	116,849	145,849	157,393	(s)973,549	(s)1,125,861	(s)1,472,439
78	Road vehicles (including air cushion vehicles)	229,656	268,553	298,972	1,807,382	2,303,355	3,087,708
79	Other transport equipment	132,663	181,152	240,285	533,475	740,884	566,522
81	Sanitary, plumbing, heating and lighting fixtures and fittings, n.e.s.	7,064	8,531	8,963	40,751	44,989	67,964
82	Furniture and parts thereof	13,163	18,781	16,050	112,364	144,528	193,530
83	Travel goods, handbags and similar containers	1,840	2,273	6,011	88,998	107,238	137,046
84	Articles of apparel and clothing accessories	16,748	16,497	17,539	389,855	425,375	538,994
85	Footwear	4,159	5,201	5,101	144,703	160,335	178,605
87	Professional, scientific and controlling instruments and apparatus, n.e.s.	133,756	147,217	171,230	437,988	510,943	641,837
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks	131,706	148,763	177,266	(r)373,691	(r)402,479	(r)511,329
89	Miscellaneous manufactured articles, n.e.s.	167,683	163,076	190,655	1,145,447	1,323,342	1,596,486
9A	Commodities and transactions of merchandise trade, n.e.s.	(u)645,670	(u)709,512	(u)952,107	(v)390,140	(w)668,139	(x)1,000,109
	Total merchandise(y)	21,455,553	24,027,637	29,809,273	21,215,580	23,540,330	29,055,754
9B	Non-merchandise (z)	667,547	752,873	830,233	590,434	520,537	970,610
	Total	22,123,101	24,780,510	30,639,506	21,806,015	24,060,866	30,026,364

(a) Excludes AECC items 287.31.00, 287.70.00, 287.93.07 and 287.99.19. (b) Excludes AICC items 513.79.13 and 513.90.15. (c) Excludes AICC items 511.13.01 from 1.10.83; 511.40.01 from 1.1.84; 513.79.13 and 513.90.15. (d) Excludes AICC items 511.13.01, 511.40.01, 513.79.13, 513.90.13 from 1.10.84; and 513.90.15. (e) Excludes AECC item 522.49.00. (f) Excludes AICC item 522.13.00 from 1.3.84. (g) Excludes AICC item 522.13.00. (h) Excludes AECC item 533.10.00. (i) Excludes AICC item 582.70.04. (j) Excludes AICC item 651.95.06 from 1.11.82. (k) Excludes AICC item 651.95.06. (l) Includes AICC item 661.20.01 from 1.3.83. (m) Excludes AICC items 691.10.05 from 1.5.83; 694.01.02 and 695.39.60. (n) Excludes AICC items 691.10.05, 694.01.02 and 695.39.60. (o) Excludes AICC item 723.30.01. (p) Excludes AICC items 749.10.70 and 749.10.76. (q) Excludes AICC item 775.86.01. (r) Excludes AICC item 881.11.45. (s) Includes AICC items 287.31.00, 287.70.00, 287.93.07, 287.99.19, 522.49.00 and 533.10.00. (t) Includes AICC items 513.79.13, 513.90.15, 582.70.04, 651.95.06 from 1.11.82; 661.20.01 until 28.2.83; 691.10.05 from 1.5.83; 694.01.02, 695.39.60, 723.30.01, 749.10.70, 749.10.76, 775.86.01 and 881.11.45. (u) Includes AICC items 511.13.01 from 1.10.83; 511.40.01 from 1.1.84; 513.79.13, 513.90.15; 522.13.00 from 1.3.84; 582.70.04, 651.95.06, 691.10.05, 694.01.02, 695.39.60, 723.30.01, 749.10.70, 775.86.01 and 881.11.45. (v) Includes AICC items 511.13.01, 511.40.01, 513.79.13, 513.90.13 from 1.10.84; 513.90.15, 522.13.00, 582.70.04, 691.10.05, 694.01.02, 695.39.60, 723.30.01, 749.10.70, 749.10.76, 775.86.01 and 885.11.45. (w) The sum of Divisions 00 to 9A. (x) A complete description of non-merchandise items is contained in the *Australian Export Commodity Classification* (1203.0) and the *Australian Import Commodity Classification* (1204.0)

EXPORTS OF MAJOR COMMODITIES

Commodity	Unit of quantity	Quantity			Value (\$'000)		
		1982-83	1983-84	1984-85(p)	1982-83	1983-84	1984-85(p)
Aluminum and alloys, unwrought	tonnes	197,035	267,791	521,422	226,654	440,280	798,324
Aluminium oxide and hydroxide	"	5,729,426	6,931,957	7,014,113	1,073,534	1,256,680	1,384,676
Barley	"	834,374	3,121,752	5,344,578	131,371	499,366	778,311
Butter	"	15,565	29,750	42,912	41,140	57,890	74,349
Cars, passenger motor, assembled and unassembled	"	..	..	..	79,885	114,085	110,904
Cheese	tonnes	54,451	54,590	67,611	134,556	141,219	163,691
Coal (anthracite, bituminous and sub-bituminous) (except briquettes)	"	54,645,595	64,325,744	85,297,940	3,072,536	3,328,166	4,603,973



## EXPORTS OF MAJOR COMMODITIES—(continued)

Commodity	Unit of quantity	Quantity			Value (\$'000)		
		1982-83	1983-84	1984-85(p)	1982-83	1983-84	1984-85(p)
Copper, ore and concentrates . . . . .	"	225,271	221,411	216,431	83,565	97,997	100,307
Copper, refined, unwrought . . . . .	"	71,093	76,178	63,369	114,546	126,470	110,217
Crustaceans and molluscs (except canned or bottled) . . . . .	..	..	..	..	309,269	353,716	357,359
Flour (wheaten) plain white . . . . .	tonnes	54,684	31,201	43,721	14,441	8,023	12,162
Fruit, fresh and nuts, fresh or dried . . . . .	"	162,201	136,907	162,330	129,850	117,273	140,911
Fruit, preserved and fruit preparations . . . . .	..	..	..	..	70,849	60,002	61,158
Hides, bovine and equine (except calf and kip skins) . . . . .	tonnes	133,439	107,387	95,178	133,400	161,391	169,307
Iron and steel ingots and other primary forms . . . . .	"	600,734	427,059	650,005	120,712	86,597	169,816
Iron ore and concentrates (except roasted iron pyrites) . . . . .	"	66,760,797	83,221,230	89,100,072	1,487,474	1,619,022	1,869,234
Iron, pig and cast . . . . .	"	367,306	219,775	58,594	26,516	20,155	6,226
Lead and lead alloys (including silver-lead) unwrought . . . . .	"	34,187	369,047	299,765	301,521	309,904	250,904
Meat, fresh, chilled or frozen, beef—boneless . . . . .	"	531,549	416,836	395,053	1,153,583	1,049,343	1,040,149
Meat, fresh, chilled or frozen—bovine animals, other . . . . .	"	74,689	34,750	16,652	135,377	70,882	37,929
Meat, fresh, chilled or frozen—edible offals . . . . .	"	48,116	34,661	36,668	60,333	46,029	59,996
Meat, fresh, chilled or frozen—sheep, lambs and goats . . . . .	"	172,635	93,326	92,121	235,620	143,059	150,033
Milk and cream . . . . .	"	99,503	116,430	149,797	140,434	152,339	168,060
Nickel and nickel alloys, unwrought . . . . .	n.p.	n.p.	n.p.	n.p.	149,481	135,511	146,804
Nickel matte and speiss . . . . .	n.p.	n.p.	n.p.	n.p.	229,662	216,489	260,027
Petroleum products . . . . .	..	..	..	..	1,152,885	1,226,094	1,158,231
Rice . . . . .	tonnes	404,957	245,591	341,286	120,270	91,949	121,680
Skins, sheep and lambs, with wool on . . . . .	"	60,998	61,253	69,363	69,620	80,398	118,859
Sorghum, unmilled . . . . .	"	444,962	772,138	1,568,497	53,861	110,775	242,040
Sugar—from cane (except icing sugar) . . . . .	"	2,547,718	2,357,339	2,523,771	557,423	621,198	573,986
Titanium and zirconium ore and concentrates (except beneficiated ilmenite) . . . . .	"	1,351,487	1,729,252	1,783,488	117,981	142,404	170,785
Wheat (including spelt) and meslin, unmilled . . . . .	"	8,613,743	10,535,370	16,648,685	1,440,295	1,813,717	2,785,684
Woodchips . . . . .	"	2,079,985	2,418,508	2,363,449	165,578	205,629	208,920
Wool, carbonised—shorn and skin . . . . .	"	9,530	13,098	20,370	37,425	61,166	94,177
Wool, carded or combed (tops and other) . . . . .	"	16,226	13,799	14,969	97,990	77,533	91,230
Wool, greasy . . . . .	"	487,741	497,696	552,968	1,467,315	1,573,932	1,946,871
Wool, washed and scoured—shorn, skin and boiled . . . . .	"	46,052	53,164	56,953	205,452	252,609	290,304
Zinc, ore and concentrates . . . . .	"	683,011	795,890	724,052	145,803	185,790	199,219
Zinc and zinc alloys, unwrought . . . . .	"	231,671	229,379	217,726	184,186	228,652	255,014
<b>Total major commodities . . . . .</b>	..	..	..	..	<b>15,472,393</b>	<b>17,283,733</b>	<b>21,281,830</b>
<b>Total Exports . . . . .</b>	..	..	..	..	<b>22,123,101</b>	<b>24,780,510</b>	<b>30,639,506</b>

**EXPORTS BY AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION**  
(\$ million)

<i>ASIC Divisions/Subdivision</i>	<i>1982-83</i>	<i>1983-84</i>	<i>1984-85(p)</i>
<b>Agriculture, forestry, fishing and hunting</b>			
Agriculture . . . . .	3,554.1	4,505.3	6,332.8
Forestry and Logging . . . . .	6.6	3.5	2.7
Fishing and hunting . . . . .	13.4	11.9	12.8
<i>Total.</i> . . . . .	<i>3,574.0</i>	<i>4,520.6</i>	<i>6,348.3</i>
<b>Mining</b>			
Metallic . . . . .	2,366.2	2,540.8	2,861.2
Coal . . . . .	3,074.8	3,331.4	4,606.8
Oil and gas . . . . .	343.1	635.3	1,636.1
Construction materials . . . . .	0.2	1.6	1.2
Other non-metallic minerals . . . . .	115.0	168.5	171.7
<i>Total.</i> . . . . .	<i>5,899.3</i>	<i>6,677.6</i>	<i>9,277.0</i>
<b>Manufacturing</b>			
Food, beverages and tobacco . . . . .	3,823.3	3,749.7	3,848.5
Textiles . . . . .	618.0	631.9	832.2
Clothing and footwear . . . . .	20.5	24.2	25.4
Wood, wood products and furniture . . . . .	203.3	246.0	246.5
Paper, paperboard, printing and publishing . . . . .	103.0	116.1	142.9
Chemical, petroleum and petroleum products . . . . .	1,558.1	1,665.7	1,669.5
Non-metallic mineral products . . . . .	43.1	50.1	45.5
Basic metal products . . . . .	3,247.4	3,819.8	4,528.9
Fabricated metal products . . . . .	159.7	173.9	154.0
Transport equipment . . . . .	439.1	583.0	677.9
Other machinery and equipment . . . . .	1,002.4	1,094.5	1,198.1
Miscellaneous manufacturing . . . . .	214.3	228.5	248.3
<i>Total.</i> . . . . .	<i>11,432.3</i>	<i>12,383.5</i>	<i>13,617.4</i>
<b>Other industries</b>			
Wholesale and retail trade, business services . . . . .	35.4	21.5	39.5
Waste and scrap n.e.s., secondhand goods . . . . .	514.5	424.4	527.0
<i>Total.</i> . . . . .	<i>549.9</i>	<i>445.9</i>	<i>566.5</i>
<i>Total merchandise</i> . . . . .	<i>21,455.6</i>	<i>24,027.6</i>	<i>29,809.3</i>
Non-merchandise . . . . .	667.5	752.4	830.2
<i>Total.</i> . . . . .	<i>22,123.1</i>	<i>24,780.5</i>	<i>30,634.5</i>

**IMPORTS BY AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION**  
(\$ million)

<i>ASIC Divisions/Subdivision</i>	<i>1982-83</i>	<i>1983-84</i>	<i>1984-85(p)</i>
<b>Agriculture, forestry, fishing and hunting</b>			
Agriculture . . . . .	317.1	374.2	418.7
Forestry and logging . . . . .	2.3	2.1	2.5
Fishing and hunting . . . . .	4.9	5.5	5.3
<i>Total.</i> . . . . .	<i>324.3</i>	<i>381.8</i>	<i>426.5</i>
<b>Mining</b>			
Metallic . . . . .	8.4	7.0	11.4
Coal . . . . .	2.6	2.6	4.5
Oil and gas . . . . .	1,892.7	1,067.9	910.1
Construction materials . . . . .	8.4	10.6	16.1
Other non-metallic minerals . . . . .	186.5	156.2	184.8
<i>Total.</i> . . . . .	<i>2,098.6</i>	<i>1,244.4</i>	<i>1,126.9</i>
<b>Manufacturing</b>			
Confidential items falling within ASIC classes 0124 to 2963 incl. . . . .	1.3	4.9	3.8
Food, beverages and tobacco . . . . .	870.0	1,050.2	1,280.8
Textiles . . . . .	1,030.7	1,321.1	1,464.8
Clothing and footwear . . . . .	561.4	617.3	758.0
Wood, wood products and furniture . . . . .	371.6	492.8	672.0
Paper, paperboard, printing and publishing . . . . .	901.5	1,097.9	1,402.8
Chemical, petroleum and petroleum products . . . . .	2,798.4	3,083.7	3,669.2
Non-metallic mineral products . . . . .	335.5	377.9	442.9
Basic metal products . . . . .	722.6	626.8	772.9
Confidential items falling within ASIC classes 3141 to 3487 incl. . . . .	0.1	—	—
Fabricated metal products . . . . .	576.7	600.7	747.9
Transport equipment . . . . .	2,546.4	3,281.2	3,956.0
Other machinery and equipment . . . . .	6,423.3	7,136.3	9,379.0
Miscellaneous manufacturing . . . . .	1,215.4	1,501.1	1,854.5
<i>Total.</i> . . . . .	<i>18,355.5</i>	<i>21,191.0</i>	<i>26,454.7</i>
<b>Other industries</b>			
Wholesale and retail trade, business services . . . . .	77.2	89.2	108.9
Waste and scrap n.e.s., secondhand goods . . . . .	360.1	633.0	938.7
<i>Total.</i> . . . . .	<i>437.3</i>	<i>722.2</i>	<i>1,047.6</i>
<i>Total merchandise</i> . . . . .	<i>21,215.6</i>	<i>23,540.3</i>	<i>29,055.8</i>
Non-merchandise . . . . .	590.4	520.5	970.5
<i>Total.</i> . . . . .	<i>21,806.0</i>	<i>24,060.9</i>	<i>30,026.4</i>

## EXPORTS AND IMPORTS BY BROAD ECONOMIC CATEGORIES

Broad Economic Category	Exports				Imports			
	1983-84		1984-85(p)		1983-84		1984-85(p)	
	\$million	Proportion to total	\$million	Proportion to total	\$million	Proportion to total	\$million	Proportion to total
<b>FOOD AND BEVERAGES</b>	5,887.0	23.8	7,341.3	24.0	1,173.0	4.9	1,422.0	4.7
Primary	3,022.8	12.2	4,472.4	14.6	355.6	1.5	414.5	1.4
Mainly for industry	2,486.5	10.0	3,896.8	12.7	140.7	0.6	150.1	0.5
Mainly for household consumption	536.4	2.2	575.7	1.9	214.8	0.9	264.4	0.9
Processed	2,864.2	11.6	2,868.8	9.4	817.5	3.4	1,007.5	3.4
Mainly for industry	826.9	3.3	801.3	2.6	152.3	0.6	180.0	0.6
Mainly for household consumption	2,037.3	8.2	2,067.5	6.7	665.1	2.8	827.5	2.8
<b>INDUSTRIAL SUPPLIES</b>								
n.e.s.	10,481.4	42.3	12,329.2	40.2	6,405.4	26.6	7,742.3	25.8
Primary	5,502.3	22.2	6,535.8	21.3	398.3	1.7	460.5	1.5
Processed	4,979.1	20.1	5,793.4	18.9	6,007.1	25.0	7,281.8	24.3
<b>FUELS AND LUBRICANTS</b>	5,188.7	20.9	7,395.8	24.1	2,124.9	8.8	2,202.9	7.3
Primary	3,531.4	14.3	5,840.9	19.1	1,069.2	4.4	914.0	3.0
Processed	1,657.3	6.7	1,554.9	5.1	1,055.7	4.4	1,288.9	4.3
Motor spirit	188.6	0.8	137.0	0.4	78.5	0.3	145.4	0.5
Other	1,468.8	5.9	1,417.9	4.6	977.2	4.1	1,143.5	3.8
<b>CAPITAL GOODS (except transport equipment), and parts and accessories thereof</b>	1,050.3	4.2	1,168.8	3.8	5,607.8	23.3	7,513.3	25.0
Capital goods (except transport equipment)	699.2	2.8	779.7	2.5	3,948.4	16.4	5,341.7	17.8
Parts and accessories	351.2	1.4	389.2	1.3	1,659.4	6.9	2,171.7	7.2
<b>TRANSPORT EQUIPMENT and parts and accessories thereof</b>	626.2	2.5	684.2	2.2	3,561.0	14.8	4,341.3	14.5
Passenger motor cars(a)	25.9	0.1	19.8	0.1	505.8	2.1	701.4	2.3
Other	126.8	0.5	125.5	0.4	1,525.2	6.3	1,592.3	5.3
Industrial	100.8	0.4	107.6	0.4	1,321.6	5.5	1,375.4	4.6
Non-industrial	26.0	0.1	17.9	0.1	203.6	0.8	216.9	0.7
Parts and accessories(a)	473.5	1.9	538.9	1.8	1,530.0	6.4	2,047.6	6.8
<b>CONSUMER GOODS n.e.s.</b>	462.2	1.9	493.6	1.6	4,037.4	16.8	4,880.3	16.3
Durable	106.7	0.4	119.2	0.4	1,547.8	6.4	1,829.3	6.1
Semi-durable	94.8	0.4	103.0	0.3	1,558.6	6.5	1,898.4	6.3
Non-durable	260.7	1.1	271.4	0.9	931.0	3.9	1,152.6	3.8
<b>GOODS n.e.s.</b>	331.7	1.3	396.3	1.3	630.8	2.6	953.5	3.2
Total merchandise	24,027.6	97.0	29,804.3	97.3	23,540.3	97.8	29,055.8	96.8
Non-merchandise	752.9	3.0	830.2	2.7	520.5	2.2	970.6	3.2
<b>Total</b>	<b>24,780.5</b>	<b>100.0</b>	<b>30,639.5</b>	<b>100.0</b>	<b>24,060.9</b>	<b>100.0</b>	<b>30,026.4</b>	<b>100.0</b>

(a) Unassembled road motor vehicles are included with parts and accessories of transport equipment.

### Direction of Foreign Trade

#### Exports and imports, by country of consignment or of origin

The following table shows the value and percentage of Australian exports and imports according to principal country of consignment or origin. The proportions of Australian exports and imports by country of origin or consignment are shown graphically on Plate 45 on page 599.

AUSTRALIAN EXPORTS AND IMPORTS, VALUE BY COUNTRY OR COUNTRY GROUP OF  
CONSIGNMENT OR ORIGIN  
(\$'000)

Country	Exports			Imports		
	1982-83	1983-84	1984-85(p)	1982-83	1983-84	1984-85(p)
Argentina (Argentine Republic) . . . . .	38,008	57,614	58,803	6,319	9,734	15,278
Associations of South-East Asian Nations—						
Brunei Darussalam . . . . .	—	8,224	10,849	—	138	—
Indonesia, Republic of . . . . .	406,857	378,932	419,872	561,376	299,590	367,298
Malaysia . . . . .	482,381	466,923	607,597	214,502	257,044	314,851
Philippines, Republic of . . . . .	194,623	154,014	185,114	84,118	92,066	110,613
Singapore, Republic of . . . . .	733,579	947,817	948,741	599,843	470,219	776,570
Thailand, Kingdom of . . . . .	179,303	208,623	201,182	89,399	122,071	155,828
Total ASEAN . . . . .	1,996,744	2,164,532	2,373,355	1,549,237	1,241,129	1,725,161
Austria, Republic of . . . . .	2,624	9,194	13,262	54,906	57,784	83,542
Bahrain, State of . . . . .	93,179	92,846	108,482	40,138	90,440	80,057
Bangladesh, People's Republic of . . . . .	17,180	108,296	71,221	14,361	22,746	22,268
Brazil, Federal Republic of . . . . .	38,587	51,053	108,205	154,735	177,204	257,372
Canada . . . . .	285,892	315,240	302,403	434,643	459,656	619,274
China—excl. Taiwan Province . . . . .	643,792	609,499	1,055,935	278,891	311,629	376,577
—Taiwan Province only . . . . .	550,632	705,108	855,966	649,597	854,169	1,052,971
Czechoslovakia (Czechoslovak Socialist Republic) . . . . .	27,907	32,621	40,939	20,426	21,637	29,948
Egypt, Arab Republic of . . . . .	411,423	350,853	446,161	112	172	385
European Economic Community—						
Belgium-Luxembourg . . . . .	165,651	157,313	182,497	124,792	161,677	216,654
Denmark, Kingdom of . . . . .	22,593	34,297	65,584	77,619	101,158	132,281
France (French Republic) . . . . .	495,284	482,442	679,694	454,765	514,201	637,085
Germany, Federal Republic of . . . . .	548,615	720,728	792,607	1,298,605	1,385,076	1,851,534
Greece (Hellenic Republic) . . . . .	41,822	20,406	66,768	18,803	20,564	51,767
Ireland (Irish Republic) . . . . .	2,205	2,950	2,962	97,179	99,258	124,991
Italy (Italian Republic) . . . . .	368,378	481,544	584,045	538,320	747,972	884,110
Netherlands, Kingdom of the . . . . .	297,477	320,666	481,901	303,285	336,061	376,121
United Kingdom of Great Britain and Northern Ireland . . . . .	1,181,251	1,144,221	1,017,672	1,466,930	1,739,469	2,011,886
Total EEC . . . . .	3,123,276	3,364,568	3,873,730	4,380,299	5,105,437	6,286,428
Fiji . . . . .	175,853	188,010	160,242	23,347	31,730	40,103
Finland, Republic of . . . . .	34,970	24,717	21,947	108,428	149,515	194,082
Hong Kong . . . . .	349,703	609,670	844,108	485,322	552,226	658,273
India, Republic of . . . . .	210,845	140,667	233,775	142,288	119,313	169,426
Iran, Islamic Republic of . . . . .	231,945	297,204	459,608	39,687	3,499	2,656
Iraq, Republic of . . . . .	108,516	174,528	264,861	1,729	6,421	2,106
Israel, State of . . . . .	53,585	24,906	42,908	57,984	68,625	77,143
Japan . . . . .	5,975,673	6,546,781	8,066,118	4,506,327	5,367,250	6,644,509
Jordan, Hashemite Kingdom of . . . . .	10,560	10,889	25,445	4,116	6,421	2,106
Korea, Republic of . . . . .	829,566	936,793	1,104,518	292,856	382,722	473,929
Kuwait, State of . . . . .	131,947	123,461	139,672	354,386	435,610	339,581
Libyan Arab/Jamahiriya, Socialist People's Mauritius . . . . .	22,699	29,047	30,947	—	3	1
Mauritius . . . . .	20,373	15,928	20,937	1,225	1,035	2,392
Mexico (United Mexican States) . . . . .	10,156	16,377	90,911	30,080	31,146	45,365
New Caledonia . . . . .	47,699	32,038	36,489	793	2,210	1,542
New Zealand . . . . .	1,155,458	1,422,029	1,591,026	649,278	921,473	1,116,312
Norway, Kingdom of . . . . .	168,208	10,836	11,309	33,839	58,877	66,110
Oman, Sultanate of . . . . .	36,311	32,415	46,696	46,796	28,600	9,502
Pakistan, Islamic Republic of . . . . .	55,353	54,901	134,968	23,521	31,241	28,505
Papua New Guinea . . . . .	508,235	493,829	560,896	69,042	76,679	114,353
Poland (Polish People's Republic) . . . . .	69,624	117,803	118,601	10,369	12,253	15,836
Portugal (Portuguese Republic) . . . . .	19,251	24,049	26,119	19,853	23,098	25,511
Romania, Socialist Republic of . . . . .	8,918	45,464	60,937	57,956	5,394	20,017
Saudi Arabia, Kingdom of . . . . .	352,958	387,910	522,596	976,780	679,829	638,092
South Africa, Republic of . . . . .	144,533	281,734	204,988	84,944	132,365	137,292
Spain (Spanish State) . . . . .	73,549	94,815	149,215	65,095	91,163	138,034
Sri Lanka, Democratic Socialist Republic of . . . . .	22,208	25,193	82,732	11,305	12,804	21,437
Sweden, Kingdom of . . . . .	34,136	37,517	52,500	277,859	343,032	523,020
Switzerland (Swiss Confederation) . . . . .	31,034	57,896	54,302	197,395	229,154	359,894
Turkey, Republic of . . . . .	19,514	32,850	58,655	4,339	7,011	9,233
Uganda, Republic of . . . . .	571	382	4,715	6,949	13,894	14,963
United Arab Emirates . . . . .	141,846	157,430	189,838	394,027	267,205	170,639

AUSTRALIAN EXPORTS AND IMPORTS, VALUE BY COUNTRY OR COUNTRY GROUP OF  
CONSIGNMENT OR ORIGIN—continued  
(\$'000)

Country	Exports			Imports		
	1982-83	1983-84	1984-85(p)	1982-83	1983-84	1984-85(p)
United States of America . . . . .	2,241,147	2,703,357	3,584,062	4,766,424	5,187,880	6,819,311
U.S.S.R. . . . .	506,952	583,199	873,383	12,314	12,094	28,877
Venezuela, Republic of. . . . .	17,669	1,490	5,614	24	7,698	826
Yemen, Arab Republic. . . . .	22,437	20,784	13,821	—	6	2
Yemen, People's Democratic Republic of	35,409	42,417	88,767	—	—	—
Yugoslavia, Socialist Federal Republic of	67,141	38,464	130,611	14,210	20,526	28,801
Zimbabwe . . . . .	5,808	3,994	4,595	3,470	3,417	4,804
Other countries . . . . .	841,726	956,320	1,063,881	397,550	380,587	504,898
'For Orders' and Country of origin or destination unknown. . . . .	99,771	120,992	153,731	5,444	5,123	27,620
<b>Total . . . . .</b>	<b>22,123,101</b>	<b>24,780,510</b>	<b>30,639,506</b>	<b>21,806,015</b>	<b>24,060,866</b>	<b>30,026,364</b>

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN  
EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1984-85 (p)  
(\$'000)

Division No.	Description	ASEAN		Belgium-Luxembourg		Canada	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	14,497	—	—	—	5	4,133
01	Meat and meat preparations . . . . .	34,025	211	4,785	22	40,585	109
02	Dairy products and birds' eggs. . . . .	126,039	—	—	304	295	67
03	Fish, crustaceans and molluscs, and preparations thereof . . . . .	9,417	65,920	576	11	436	21,967
04	Cereals and cereal preparations . . . . .	290,757	5,474	82	721	473	1,007
05	Vegetables and fruit . . . . .	51,811	20,674	1,427	708	31,043	13,037
06	Sugar, sugar preparations and honey	82,676	1,035	44	145	22,833	458
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	17,853	51,342	—	1,207	26	46
08	Feeding stuff for animals (not including unmilled cereals) . . . . .	4,301	20,223	9,640	167	2,547	2
09	Miscellaneous edible products and preparations . . . . .	7,211	6,555	—	447	97	583
11	Beverages . . . . .	4,100	237	64	107	1,910	256
12	Tobacco and tobacco manufactures	314	1,377	—	4	14	785
21	Hides, skins and furskins, raw . . . . .	550	3	1,130	2	132	60
22	Oilseeds and oleaginous fruit . . . . .	187	377	123	—	21	142
23	Crude rubber (including synthetic and reclaimed) . . . . .	65	37,479	—	1,630	—	188
24	Cork and wood . . . . .	446	89,950	1,082	—	156	85,046
25	Pulp and waste paper . . . . .	456	—	—	—	—	37,666
26	Textile fibres (other than wool tops) and their wastes (not manufactured into yarn or fabric) . . . . .	26,879	1,157	36,987	1,364	2,535	9,121
27	Crude fertilisers and crude minerals (excluding coal, petroleum and precious stones) . . . . .	9,645	1,468	1,357	203	—	58,437
28	Metalliferous ores and metal scrap	135,454	3,295	59,579	68	36,288	2,133
29	Crude animal and vegetable materials, n.e.s. . . . .	4,051	7,096	571	14	410	2,135
32	Coal, coke and briquettes . . . . .	48,401	—	37,990	—	—	4
33	Petroleum, petroleum products and related materials . . . . .	341,573	684,450	1	388	11	559
34	Gas, natural and manufactured . . . . .	—	—	—	38	—	—
41	Animal oils and fats . . . . .	4,231	587	329	—	55	—
42	Fixed vegetable oils and fats . . . . .	1,016	9,526	6	—	1	—
43	Animal and vegetable oils and fats, processed, and waxes of animal or vegetable origin . . . . .	1,006	39,053	18	43	23	1
51	Organic chemicals . . . . .	3,857	11,629	3	9,962	—	5,516
52	Inorganic chemicals . . . . .	14,288	1,494	14	2,175	15	1,521

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN  
EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1984-85 (p)—*continued*  
(\$'000)

Division No.	Description	ASEAN		Belgium- Luxembourg		Canada	
		Exports	Imports	Exports	Imports	Exports	Imports
53	Dyeing, tanning and colouring materials . . . . .	7,499	387	—	1,513	243	1,365
54	Medicinal and pharmaceutical products . . . . .	17,947	3,348	401	2,846	3,709	6,133
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	11,457	689	81	5,016	35	4,466
56	Fertilisers, manufactured . . . . .	1,209	1,026	—	608	—	31,662
57	Explosives and pyrotechnic products . . . . .	149	222	—	—	—	2,090
58	Artificial resins and plastic materials, and cellulose esters and ethers . . . . .	6,261	8,231	3	7,709	189	8,832
59	Chemical materials and products, n.e.s. . . . .	13,751	14,348	12	6,095	201	2,146
61	Leather, leather manufactures, n.e.s., and dressed furskins . . . . .	1,312	3,813	14	135	696	202
62	Rubber manufactures, n.e.s. . . . .	1,853	21,887	27	3,488	16	3,356
63	Cork and wood manufactures (excluding furniture) . . . . .	469	46,377	14	196	3	2,393
64	Paper, paperboard, and articles of paper pulp, of paper or of paperboard . . . . .	14,217	7,557	—	6,934	145	59,931
65	Textile yarn, fabrics, made-up articles, n.e.s., and related products . . . . .	7,867	63,768	169	21,209	874	13,831
66	Non-metallic manufactures, n.e.s. . . . .	22,323	14,992	6,713	17,175	586	5,264
67	Iron and steel . . . . .	84,291	7,222	176	2,825	5,690	1,213
68	Non-ferrous metals . . . . .	126,426	4,988	6,347	843	102	3,580
69	Manufactures of metals, n.e.s. . . . .	40,359	21,842	644	5,380	2,510	14,046
71	Power generating machinery and equipment . . . . .	3,815	2,023	66	5,164	2,326	13,092
72	Machinery specialised for particular industries . . . . .	40,323	7,174	166	35,494	5,043	39,080
73	Metalworking machinery . . . . .	7,222	1,351	4	1,087	283	1,158
74	General industrial machinery and equipment, n.e.s., and machine parts, n.e.s. . . . .	32,213	13,253	679	17,579	2,471	17,684
75	Office machines and automatic data processing equipment . . . . .	11,277	19,102	659	1,316	471	23,101
76	Telecommunications and sound recording and reproducing apparatus and equipment . . . . .	5,768	36,794	23	4,665	387	9,571
77	Electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof . . . . .	20,739	54,634	166	6,643	764	17,482
78	Road vehicles (including air cushion vehicles) . . . . .	7,708	5,204	1,864	2,714	692	19,306
79	Other transport equipment . . . . .	33,392	477	30	28	1,673	4,958
81	Sanitary, plumbing, heating and lighting fixtures and fittings, n.e.s. . . . .	2,568	3,245	—	141	6	1,064
82	Furniture and parts thereof . . . . .	2,810	19,800	10	454	570	4,083
83	Travel goods, handbags and similar containers . . . . .	485	9,153	—	48	9	156
84	Articles of apparel and clothing accessories . . . . .	1,211	24,480	21	509	436	929
85	Footwear . . . . .	290	10,506	—	3	64	270
87	Professional, scientific and controlling instruments and apparatus, n.e.s. . . . .	18,308	5,697	350	1,514	4,134	7,687
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks . . . . .	48,427	4,293	357	15,437	298	1,401
89	Miscellaneous manufactured articles . . . . .	15,177	66,534	713	7,609	3,701	20,897
9A	Commodities and transactions of merchandise trade, not elsewhere classified . . . . .	351,677	94,072	6,483	13,820	120,083	18,295
	<i>Total merchandise</i> . . . . .	<i>2,195,907</i>	<i>1,659,100</i>	<i>182,000</i>	<i>215,926</i>	<i>298,322</i>	<i>605,699</i>
9B	Non-merchandise . . . . .	177,433	66,061	497	728	4,081	13,575
	<b>Grand total</b> . . . . .	<b>2,373,340</b>	<b>1,725,161</b>	<b>182,497</b>	<b>216,654</b>	<b>302,403</b>	<b>619,274</b>

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN  
EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1984-85(p)—continued  
(\$'000)

Division No.	China-excl. Taiwan Province		China-Taiwan Province only		EEC		France (French Republic)		Germany, Federal Republic of	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	63	-	1,074	-	153	4,435	153	-	-	-
01	8	175	65,503	-	66,981	4,477	9,589	295	12,481	324
02	936	-	40,909	31	10,556	35,398	-	4,394	508	7,683
03	5	4,462	4,272	5,507	11,502	18,685	5,520	148	681	3,006
04	309,769	1,857	82,760	512	5,878	21,775	29	809	167	2,776
05	21	15,962	1,748	15,814	61,402	32,241	5,583	1,538	26,118	2,384
06	25,153	156	34	390	11,320	7,852	33	419	3,427	1,013
07	-	666	37	43	131	34,995	-	1,263	129	5,903
08	16	30	3,180	317	36,707	5,138	42	22	10,609	1,154
09	704	1,579	97	1,801	193	14,488	-	1,525	31	2,027
11	108	126	73	47	2,284	103,319	125	34,712	118	5,734
12	-	-	-	-	11	17,354	-	41	10	61
21	10,881	193	3,759	-	183,880	683	76,106	3	15,195	43
22	-	1,338	820	4	7,856	123	31	-	1,064	13
23	-	10	-	385	3	8,055	-	3,097	-	781
24	95	-	234	131	7,870	1,110	323	35	241	359
25	-	-	1,165	-	22	41	-	-	4	41
26	175,720	891	143,098	8,093	733,647	16,454	199,160	273	129,107	3,685
27	3	2,337	12,554	15	4,356	11,394	26	210	7	809
28	133,932	654	69,896	-	563,401	952	97,599	129	212,919	248
29	1,836	4,290	1,369	1,218	15,558	11,342	362	1,450	7,076	1,928
32	19,486	-	223,354	1	827,523	888	183,905	-	28,656	760
33	29	18,822	19,016	12,149	2,219	43,646	3	940	8	4,147
34	-	-	-	-	-	247	-	102	-	8
41	22,386	-	3,699	-	7,055	174	2,228	1	3,647	1
42	1,734	800	292	388	48	5,229	-	333	5	1,264
43	197	81	482	28	1,693	10,229	315	14	793	2,971
51	87	5,166	264	7,419	515	192,032	94	20,817	32	56,584
52	1,456	6,780	5,433	5,681	967	59,314	391	3,540	307	22,404
53	35	224	221	438	318	53,101	5	2,300	10	24,384
54	38	2,565	2,242	1,836	9,533	137,953	308	7,702	631	44,497
55	327	1,065	429	3,631	611	69,327	92	26,712	124	11,508
56	7	5	107	-	-	5,045	-	296	-	1,429
57	-	2,986	-	197	-	4,533	-	317	-	277
58	64	452	279	28,491	1,423	181,158	145	15,407	143	48,294
59	10	4,834	758	844	3,452	132,626	1,661	6,055	34	26,224
61	12,362	406	559	11,720	8,742	31,452	88	925	130	3,544
62	11	1,246	91	14,872	1,466	93,507	28	21,270	452	20,502
63	-	1,229	20	32,714	299	11,096	4	2,680	48	3,354
64	5,955	4,337	431	3,608	524	210,130	27	11,805	35	75,456
65	60	103,085	2,281	135,570	1,645	238,466	34	24,457	267	48,171
66	54	5,694	1,307	16,640	12,902	219,752	254	24,452	1,963	28,432
67	95,506	346	3,832	14,752	17,283	47,005	1	8,871	456	13,060
68	43,878	159	33,958	3,090	297,804	34,800	17,666	3,462	15,689	111,334
69	2,581	8,424	1,973	84,876	10,339	169,449	607	12,756	1,797	58,261
71	-	446	54	17,921	132,993	174,683	473	11,902	60,481	62,913
72	4,281	599	673	22,682	13,084	550,218	695	46,913	2,733	242,030
73	12	1,060	43	16,336	2,109	69,858	965	4,127	371	31,962
74	1,365	1,521	1,178	22,802	12,778	416,909	1,314	23,395	2,029	149,813
75	821	160	556	29,049	16,983	269,114	946	7,973	2,684	35,067
76	234	2,240	202	38,178	13,837	135,433	676	22,370	1,153	30,872
77	706	3,154	522	37,334	15,393	326,122	1,127	30,500	3,758	150,039
78	38	130	179	45,501	20,976	453,529	827	39,054	2,696	261,959
79	1,401	3	4,222	4,424	21,183	191,505	1,670	30,175	1,006	10,036
81	-	151	8	11,091	448	22,795	-	1,743	12	5,487
82	160	5,148	43	36,747	1,426	74,079	-	1,495	49	16,144
83	-	10,564	3	43,314	27	11,504	15	736	-	811
84	85	79,007	249	96,207	1,380	49,760	638	7,464	106	6,621
85	69	18,765	2	53,395	105	35,930	13	4,434	8	2,232
87	3,445	299	753	5,942	36,610	170,166	7,937	10,407	4,446	65,182
88	30	1,291	14,379	12,711	5,633	133,615	213	20,707	1,534	42,406
89	138	27,333	584	133,500	35,052	441,790	3,529	21,968	3,752	68,732
9A	176,778	20,049	98,425	11,962	445,769	270,559	53,044	27,967	158,563	82,934
Total	1,055,078	375,352	855,682	1,052,402	3,705,857	6,090,040	676,620	558,905	720,502	1,812,078
9B	857	1,225	284	569	167,873	196,388	3,074	78,180	72,105	39,456
Total	1,055,935	376,577	855,966	1,052,971	3,873,730	6,286,428	679,694	637,085	792,607	1,851,534

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN  
EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1984-85 (p)—continued  
(\$'000)

Division No.	Description	Hong Kong		Indonesia Republic of		Iran Islamic Republic of	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	1,392	—	3,774	—	—	—
01	Meat and meat preparations . . . . .	9,433	39	2,935	8	—	—
02	Dairy products and birds' eggs . . . . .	16,610	—	17,470	—	3,455	—
03	Fish, crustaceans and molluscs, and prepa- rations thereof . . . . .	26,871	3,887	68	2,819	17	1
04	Cereals and cereal preparations . . . . .	33,529	1,360	96,970	168	408,529	—
05	Vegetables and fruit . . . . .	15,135	1,360	1,140	2,189	—	875
06	Sugar, sugar preparations and honey . . . . .	434	237	406	22	—	—
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	4,781	105	740	24,182	—	—
08	Feeding stuff for animals (not including unmilled cereals) . . . . .	1,065	67	908	64	—	—
09	Miscellaneous edible products and prepa- rations . . . . .	3,590	3,940	2,226	90	—	—
11	Beverages . . . . .	1,542	102	1,447	1	1	—
12	Tobacco and tobacco manufactures . . . . .	—	—	147	141	—	—
21	Hides, skins and furskins, raw . . . . .	1,644	—	—	2	—	—
22	Oilseeds and oleaginous fruit . . . . .	281	30	7	21	—	—
23	Crude rubber (including synthetic and reclaimed) . . . . .	—	—	—	5,999	—	—
24	Cork and wood . . . . .	4	223	73	3,833	—	—
25	Pulp and waste paper . . . . .	—	—	372	—	—	—
26	Textile fibres (other than wool tops) and their wastes (not manufactured into yarn or fabric) . . . . .	11,468	628	9,041	3	565	—
27	Crude fertilisers and crude minerals (ex- cluding coal, petroleum and precious stones) . . . . .	96	19	3,195	104	3	—
28	Metalliferous ores and metal scrap . . . . .	6,043	102	2,225	1	—	—
29	Crude animal and vegetable materials, n.e.s. . . . .	2,686	720	249	276	455	2
32	Coal, coke and briquettes . . . . .	84,698	—	9,873	—	22,948	—
33	Petroleum, petroleum products and related materials . . . . .	9,299	197	3,500	277,124	—	—
34	Gas, natural and manufactured . . . . .	—	2	—	—	—	—
41	Animal oils and fats . . . . .	219	—	317	—	—	—
42	Fixed vegetable oils and fats . . . . .	211	573	221	—	—	—
43	Animal and vegetable oils and fats, pro- cessed and waxes of animal or vegetable origin . . . . .	546	1	130	1,086	—	—
51	Organic chemicals . . . . .	255	608	939	659	—	—
52	Inorganic chemicals . . . . .	3,549	151	9,354	16	—	—
53	Dyeing, tanning and colouring materials . . . . .	1,897	428	1,710	—	—	8
54	Medicinal and pharmaceutical products . . . . .	9,050	202	1,092	590	899	—
55	Essential oils and perfume materials; toilet, polishing and cleansing prepa- rations . . . . .	2,832	3,981	1,317	183	—	—
56	Fertilisers, manufactured . . . . .	63	—	583	54	—	—
57	Explosives and pyrotechnic products . . . . .	—	91	1	—	—	—
58	Artificial resins and plastic materials; and cellulose esters and ethers . . . . .	2,719	1,189	730	—	—	—
59	Chemical materials and products, n.e.s. . . . .	1,773	896	2,807	2	53	—
61	Leather, leather manufactures, n.e.s., and dressed furskins . . . . .	4,884	1,251	5	818	—	—
62	Rubber manufactures, n.e.s. . . . .	133	762	552	3,627	—	—
63	Cork and wood manufactures (excluding furniture) . . . . .	174	788	87	2,609	—	—
64	Paper, paperboard, and articles of paper pulp, of paper or of paperboard . . . . .	6,403	4,713	2,114	314	—	—
65	Textile yarn, fabrics, made-up articles, n.e.s. and related products . . . . .	2,715	110,398	1,769	7,964	2	1,516
66	Non-metallic mineral manufactures, n.e.s. . . . .	9,110	5,746	1,598	1,232	—	—
67	Iron and steel . . . . .	4,757	9	16,401	—	—	—
68	Non-ferrous metals . . . . .	18,980	2,244	57,230	—	4,152	—
69	Manufactures of metal, n.e.s. . . . .	8,365	38,401	11,844	258	180	—
71	Power generating machinery and equipment . . . . .	6,371	2,168	737	309	—	—
72	Machinery specialised for particular industries . . . . .	1,242	2,540	6,416	3	3,311	—
73	Metalworking machinery . . . . .	328	504	2,014	—	25	—
74	General industrial machinery and equip- ment, n.e.s. and machine parts, n.e.s. . . . .	2,317	4,557	5,639	5	29	—
75	Office machines and automatic data pro- cessing equipment . . . . .	12,961	14,122	460	3	—	—



EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN  
EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1984-85(p)—*continued*

(\$'000)

Division No.	Description	Hong Kong		Indonesia Republic of		Iran Islamic Republic of	
		Exports	Imports	Exports	Imports	Exports	Imports
76	Telecommunications and sound recording and reproducing apparatus and equipment . . . . .	4,706	28,220	1,388	-	60	-
77	Electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof . . . . .	10,996	68,845	1,430	679	539	-
78	Road vehicles (including air cushion vehicles) . . . . .	516	1,473	1,421	-	1,359	-
79	Other transport equipment . . . . .	1,723	2,755	10,302	7	240	-
81	Sanitary, plumbing, heating and lighting fixtures and fittings, n.e.s. . . . .	446	6,271	2	7	-	-
82	Furniture and parts thereof . . . . .	711	2,742	123	578	-	-
83	Travel goods, handbags and similar containers . . . . .	564	36,470	20	127	-	-
84	Articles of apparel and clothing accessories . . . . .	810	128,492	266	3,103	-	-
85	Footwear . . . . .	38	2,678	68	53	-	-
87	Professional, scientific and controlling instruments and apparatus, n.e.s. . . . .	2,852	3,362	1,921	2	489	-
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks . . . . .	48,304	27,134	3,064	118	1,098	2
89	Miscellaneous manufactured articles, n.e.s. . . . .	7,216	135,414	484	2,333	3	251
9A	Commodities and transactions of merchandise trade, not elsewhere classified . . . . .	428,256	3,601	106,115	23,056	11,193	-
	<i>Total merchandise</i> . . . . .	<i>839,595</i>	<i>656,797</i>	<i>409,439</i>	<i>366,841</i>	<i>459,604</i>	<i>2,656</i>
9B	Non-merchandise . . . . .	4,510	1,476	10,433	457	4	-
	<b>Grand total</b> . . . . .	<b>844,105</b>	<b>658,273</b>	<b>419,872</b>	<b>367,298</b>	<b>459,608</b>	<b>2,656</b>

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN  
EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1984-85(p)—*continued*

(\$'000)

Division No.	Italy (Italian Republic)		Japan		Korea, Republic of		Kuwait, State of		Malaysia	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00.	-	-	7,356	-	396	-	45,953	-	4,298	-
01.	645	169	401,734	17	13,790	-	2,769	-	16,321	29
02.	-	4,432	58,500	-	129	-	5,576	-	35,970	-
03.	3,555	1,373	183,483	32,026	478	8,517	14	-	492	24,966
04.	4,080	5,711	587,321	4,236	161,051	45	73,761	-	89,326	40
05.	467	12,321	13,603	1,333	2	925	2,296	-	17,335	966
06.	434	507	22,205	387	13,836	288	222	-	68,315	12
07.	-	2,122	7,818	1,231	23	100	41	-	13,454	5,093
08.	156	84	27,361	261	7,192	-	4,914	-	781	-
09.	-	801	822	4,366	18	1,047	62	-	1,467	847
11.	88	9,975	1,870	1,116	40	20	-	-	609	12
12.	-	25	3	47	-	3,272	-	-	-	-
21.	73,648	2	44,421	1	3,808	-	-	-	331	-
22.	21	-	4,760	39	1,120	1	-	-	35	-
23.	-	171	11	4,405	-	181	-	-	53	28,476
24.	-	8	784	92	-	5	-	-	14	67,270
25.	-	-	516	-	2,487	-	-	-	-	-
26.	263,489	780	598,717	16,867	94,456	62	-	-	16,507	443
27.	913	3,385	76,166	13,919	15,257	28	1	-	1,508	4
28.	30,756	16	1,553,491	2,548	158,078	-	-	-	97,225	47
29.	1,473	764	9,614	2,061	942	176	76	-	2,068	937
32.	136,659	3	2,596,933	1,494	385,694	-	-	-	3,215	-
33.	-	108	221,587	3,193	30,581	100	-	338,568	13,696	19,083
34.	-	10	-	25	-	-	-	-	-	-
41.	125	-	8,651	118	4,647	-	-	-	183	587
42.	-	2,213	1,704	338	-	-	3	-	19	6,908
43.	47	1	553	286	120	36	150	-	192	36,392
51.	-	8,697	5,443	85,637	911	7,516	1	946	371	1,547

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN  
EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1984-85(p)—*continued*  
(\$'000)

Division No.	Italy (Italian Republic)		Japan		Korea, Republic of		Kuwait, State of		Malaysia	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
52.	20	1,155	471	31,568	26	896	-	-	980	9
53.	3	1,357	655	9,829	187	1,707	-	-	689	4
54.	441	9,340	6,284	10,888	744	1,718	47	-	6,208	1,153
55.	20	4,437	292	3,579	193	908	16	-	3,273	13
56.	-	19	-	1,166	-	14	1	132	-	-
57.	-	28	-	163	-	-	-	-	-	46
58.	6	17,525	852	85,158	219	4,125	13	-	1,340	908
59.	-	1,612	6,519	17,126	985	176	6	-	4,838	758
61.	7,632	10,142	435	5,067	1,798	2,647	33	-	89	20
62.	96	15,951	252	140,301	17	21,389	-	-	243	8,181
63.	1	1,400	775	1,398	-	647	-	-	131	20,103
64.	15	54,635	1,468	88,289	51	3,401	13	-	6,690	1,568
65.	63	50,919	1,511	275,269	1,640	80,688	1	22	2,049	20,655
66.	131	83,278	9,885	107,169	296	5,715	1	-	2,376	2,517
67.	-	4,192	26,024	259,986	7,882	43,281	161	-	25,745	2
68.	3,185	2,020	85,131	15,152	12,770	2,251	157	-	23,069	3,101
69.	1,182	24,135	5,849	123,040	698	32,105	711	-	7,604	4,720
71.	16	14,363	5,858	176,570	12	780	9	10	202	30
72.	378	87,710	2,412	308,379	803	1,698	509	-	7,079	999
73.	5	10,504	1,380	73,764	31	566	69	-	1,122	37
74.	1,835	78,808	2,146	305,073	854	4,841	1,128	10	5,916	3,199
75.	1,006	33,754	5,446	411,389	147	6,677	-	-	1,651	23
76.	119	35,311	1,093	707,117	66	28,128	18	-	1,596	6,703
77.	292	28,776	3,663	456,437	97	22,911	213	2	5,429	7,077
78.	121	32,606	29,770	2,165,332	3,574	1,932	48	-	1,427	1,036
79.	1,078	18,494	1,533	74,226	96	20,566	146	-	4,989	144
81.	-	7,923	39	9,173	-	674	-	-	248	63
82.	34	44,495	674	8,734	1	537	78	-	404	2,634
83.	1	7,401	3,353	2,698	10	11,999	3	-	4	188
84.	86	22,090	982	11,076	49	60,044	5	6	127	4,211
85.	21	27,336	7	752	-	21,012	-	-	31	5,218
87.	2,003	9,059	5,089	84,360	1,182	1,802	6	1	3,034	1,039
88.	298	9,223	5,206	154,745	2,841	1,516	32	-	1,223	69
89.	872	46,107	7,227	195,020	898	39,030	202	18	3,155	5,962
9A	44,548	32,357	1,391,882	112,335	170,504	25,159	88	-	91,391	18,263
<i>Total.</i>	<i>582,067</i>	<i>882,140</i>	<i>8,049,572</i>	<i>6,608,370</i>	<i>1,103,730</i>	<i>473,858</i>	<i>139,558</i>	<i>339,581</i>	<i>598,269</i>	<i>314,308</i>
9B.	1,979	1,969	16,546	36,139	789	70	113	-	9,327	543
<i>Total.</i>	<i>584,045</i>	<i>884,110</i>	<i>8,066,118</i>	<i>6,644,509</i>	<i>1,104,518</i>	<i>473,929</i>	<i>139,671</i>	<i>339,581</i>	<i>607,597</i>	<i>314,851</i>

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN  
EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1984-85(p)—*continued*  
(\$'000)

Division No.	Description	Netherlands, Kingdom of the		New Zealand		Papua New Guinea	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	-	-	20,449	29,667	95	-
01	Meat and meat preparations . . . . .	7,089	17	1,001	13,501	37,992	-
02	Dairy products and bird's eggs . . . . .	2,925	4,260	1,176	20,392	6,818	-
03	Fish, crustaceans and molluscs, and preparations thereof . . . . .	378	2,576	4,375	53,068	788	1,278
04	Cereals and cereal preparations. . . . .	202	3,679	17,972	12,100	49,118	181
05	Vegetables and Fruit . . . . .	3,350	4,704	17,583	40,863	3,187	-
06	Sugar, sugar preparations and honey . . . . .	2,035	1,228	15,304	6,243	1,448	-
07	Coffee, tea, cocoa, spices and manufac- turers thereof . . . . .	2	17,599	1,287	1,017	2,150	45,876
08	Feeding stuff for animals (not includ- ing unmilled cereals) . . . . .	15,456	30	2,110	1,062	2,867	-
09	Miscellaneous edible products and preparations. . . . .	-	2,058	1,703	7,017	5,537	-
11	Beverages . . . . .	74	2,712	4,776	4,449	2,895	162
12	Tobacco and tobacco manufacturers . . . . .	1	11,596	193	114	7,047	1,351

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN  
EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1984-85(p)—*continued*  
(\$'000)

Division No.	Description	Netherlands, Kingdom of the		New Zealand		Papua New Guinea	
		Exports	Imports	Exports	Imports	Exports	Imports
21	Hides, skins and furskins, raw . . . . .	5,665	-	5,582	89	-	-
22	Oil seeds and oleaginous fruit . . . . .	5,499	31	2,195	65	19	-
23	Crude rubber (including synthetic and reclaimed) . . . . .	-	862	1,810	12	3	4,492
24	Cork and wood . . . . .	541	17	2,338	64,888	4	2,536
25	Pulp and waste paper . . . . .	-	-	4	42,602	53	-
26	Textile fibres (other than wool tops) and their wastes (not manufactured into yarn or fabric) . . . . .	35,623	1,158	2,494	37,865	2,689	-
27	Crude fertilisers and crude minerals (excluding coal, petroleum and precious stones) . . . . .	1,597	778	7,269	493	956	17
28	Metalliferous ores and metal scrap . . . . .	29,921	308	696	5,354	5	510
29	Crude animal and vegetable materials, n.e.s. . . . .	1,721	2,183	5,429	7,427	668	8
32	Coal, coke and briquettes . . . . .	281,383	29	280	311	7	-
33	Petroleum, petroleum products and related materials . . . . .	1,623	1,563	259,554	32,189	120,103	-
34	Gas, natural and manufactured . . . . .	-	-	-	209	-	-
41	Animal oils and fats . . . . .	-	101	2,060	98	3,922	-
42	Fixed vegetable oils and fats . . . . .	11	11	799	137	653	3,200
43	Animal and vegetable oils and fats, processed, and waxes of animal or vegetable origin. . . . .	79	5,870	951	552	1,754	-
51	Organic chemicals . . . . .	35	15,649	6,574	6,986	710	-
52	Inorganic chemicals . . . . .	-	1,590	11,657	511	1,908	-
53	Dyeing, tanning and colouring materials . . . . .	79	2,232	8,895	4,032	1,927	-
54	Medicinal and pharmaceutical products . . . . .	487	3,620	44,487	14,485	2,917	-
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	128	1,563	11,922	20,854	6,621	-
56	Fertilisers, manufactured . . . . .	-	1,818	646	5,675	235	53
57	Explosives and pyrotechnic products . . . . .	-	-	38	1	8	-
58	Artificial resins and plastic materials, and cellulose esters and ethers . . . . .	34	19,148	20,320	9,439	3,061	-
59	Chemical materials and products, n.e.s. . . . .	87	18,667	12,332	5,142	4,692	3
61	Leather, leather manufactures, n.e.s., and dressed furskins . . . . .	436	437	5,131	20,703	147	-
62	Rubber manufactures, n.e.s., . . . . .	-	1,234	5,809	4,345	1,477	10
63	Cork and wood manufactures (excluding furniture) . . . . .	8	330	1,907	26,462	143	1,939
64	Paper, paperboard, and articles of paper pulp, of paper or of paperboard . . . . .	136	10,621	23,972	94,185	10,830	2
65	Textile yarn, fabrics, made-up articles, n.e.s., and related products . . . . .	108	19,136	44,063	121,011	2,282	2
66	Non-metallic mineral manufactures, n.e.s. . . . .	2,882	4,926	18,963	13,654	4,824	30
67	Iron and steel . . . . .	107	2,674	70,921	18,670	13,737	-
68	Non-ferrous metals . . . . .	1,175	2,553	58,965	13,016	1,580	8
69	Manufactures of metal, n.e.s. . . . .	1,102	4,133	40,041	51,290	19,707	4
71	Power generating machinery and equipment . . . . .	227	3,857	15,032	1,398	5,064	14
72	Machinery specialised for particular industries . . . . .	1,692	17,783	29,326	25,193	16,452	29
73	Metalworking machinery . . . . .	164	2,136	5,491	1,844	2,334	2
74	General industrial machinery and equipment, n.e.s. and machine parts, n.e.s. . . . .	344	11,654	47,611	34,422	15,195	3
75	Office machines and automatic data processing equipment . . . . .	3,071	17,432	39,053	732	12,485	17
76	Telecommunications and sound recording and reproducing apparatus and equipment . . . . .	171	2,351	8,995	7,653	6,394	4
77	Electrical machinery, apparatus and appliances, n.e.s. and electrical parts thereof. . . . .	1,372	19,955	50,227	50,491	14,209	4
78	Road vehicles (including air cushion vehicles) . . . . .	357	9,956	153,955	17,600	12,072	57
79	Other transport equipment . . . . .	6,898	38,675	86,395	8,225	10,988	302
81	Sanitary, plumbing, heating and lighting fixtures and fittings, n.e.s. . . . .	5	649	1,830	1,351	1,938	-
82	Furniture and parts thereof . . . . .	26	1,248	4,429	16,973	1,781	97
83	Travel goods, handbags and similar containers . . . . .	1	81	184	1,919	70	-
84	Articles of apparel and clothing accessories . . . . .	50	182	3,384	27,992	1,929	295
85	Footwear . . . . .	57	33	1,447	5,468	1,787	-
87	Professional, scientific and controlling instruments and apparatus, n.e.s. . . . .	832	6,851	22,861	7,564	6,949	19
88	Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks . . . . .	154	10,312	17,732	1,743	2,464	11
89	Miscellaneous manufactured articles, n.e.s. . . . .	671	12,660	58,952	62,713	10,540	130
9A	Commodities and transactions of merchandise trade, not elsewhere classified . . . . .	57,544	21,219	229,858	20,269	56,631	51,493
	<i>Total merchandise</i> . . . . .	<i>475,611</i>	<i>350,735</i>	<i>1,542,793</i>	<i>1,105,795</i>	<i>506,864</i>	<i>114,138</i>
9B	Non-merchandise . . . . .	6,290	25,386	48,230	10,516	54,030	215
	<b>Total</b> . . . . .	<b>481,901</b>	<b>376,121</b>	<b>1,591,023</b>	<b>1,116,312</b>	<b>560,894</b>	<b>114,353</b>

EXPORTS AND IMPORTS BY COUNTRY OR COUNTRY GROUP: DIVISIONS OF THE AUSTRALIAN  
EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1984-85(p)—continued

(\$'000)

Division No.	Saudi Arabia, Kingdom of		Singapore, Republic of		United Kingdom of Great Britain and Northern Ireland		United States of America		U.S.S.R.	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	77,863	—	2,861	—	—	4,435	9,191	1,547	492	—
01	20,611	—	12,771	45	26,113	1,436	591,196	161	—	—
02	46,292	—	28,503	—	7,118	1,696	9,231	1,315	9,095	—
03	780	—	8,404	6,564	746	6,496	150,841	30,198	—	117
04	317,362	1	83,464	960	1,048	4,318	873	8,688	526,858	—
05	4,633	5	31,160	555	22,667	4,569	20,650	52,950	—	33
06	594	46	13,800	71	5,250	3,025	72,929	1,037	12,001	—
07	283	—	3,411	13,457	—	6,114	362	6,868	—	14
08	3,885	—	1,418	4	797	874	77	10,107	—	—
09	429	49	2,670	2,279	155	4,152	1,280	13,621	—	—
11	58	—	1,648	92	1,379	40,291	2,377	13,600	19	48
12	—	—	158	107	—	2,774	359	45,411	—	—
21	—	—	17	—	5,846	286	1,459	957	167	46
22	9	8	134	82	1,117	17	1,583	12,065	—	—
23	—	—	13	2,786	3	1,515	29	13,510	—	—
24	—	—	359	8,979	5,628	499	972	77,680	—	—
25	—	—	52	—	18	—	—	9,699	—	—
26	187	—	113	16	63,314	8,927	87,797	19,731	294,507	42
27	33	—	2,355	344	248	1,287	235	19,618	—	—
28	—	—	278	1,242	132,124	183	201,634	1,709	3,938	214
29	711	—	965	3,137	3,763	2,526	6,838	17,518	—	—
32	—	—	849	—	72,976	58	1,119	3,984	—	8
33	1	637,195	298,769	388,243	584	10,047	786,136	88,949	—	12,374
34	—	—	—	—	—	90	—	185	—	—
41	—	—	621	—	726	70	994	47	—	—
42	36	—	775	1,847	26	48	36	1,281	—	—
43	24	—	97	1,575	441	93	163	2,525	—	—
51	1	770	1,214	7,470	239	57,648	752	192,752	—	2
52	—	—	3,031	299	234	28,094	157	36,840	49	1,347
53	21	—	3,940	291	195	19,909	997	29,390	—	2
54	6	—	4,193	544	6,790	53,224	15,877	61,470	—	49
55	162	—	3,147	314	161	19,423	797	48,811	—	1
56	—	—	134	232	—	874	3	117,020	—	6,538
57	—	—	149	175	—	3,912	215	14,710	—	—
58	678	18	2,774	5,870	1,089	72,107	1,862	172,428	—	—
59	223	—	3,852	11,342	1,638	72,161	12,075	140,187	—	41
61	—	—	753	149	333	15,965	4,296	3,489	—	1
62	195	—	770	2,002	792	29,522	1,274	58,946	—	19
63	2	—	237	13,352	173	2,356	409	5,037	—	80
64	42	—	3,855	5,386	240	39,649	225	125,952	—	—
65	144	—	2,256	9,297	958	68,729	4,137	109,894	—	81
66	213	—	10,018	3,195	954	56,721	8,682	48,672	—	384
67	1,262	—	14,531	3,517	547	15,206	73,125	28,674	—	7
68	30,326	—	20,120	1,562	253,278	14,504	45,977	24,288	—	—
69	1,835	—	16,067	8,337	4,698	58,420	16,106	139,033	—	129
71	105	—	1,555	1,651	69,308	74,508	10,058	256,259	—	239
72	2,510	—	16,617	5,530	6,722	109,307	21,645	573,607	72	3,435
73	340	—	3,368	1,244	578	18,924	3,273	31,356	254	49
74	2,626	—	15,233	8,095	6,107	113,972	20,859	450,237	5	475
75	37	—	8,382	19,062	8,132	115,547	50,289	793,874	1,085	—
76	114	—	2,044	29,978	11,155	34,350	4,367	106,588	—	3
77	357	—	12,032	39,213	7,832	83,609	18,956	285,109	1,543	662
78	1,251	—	3,148	1,096	14,899	106,905	45,035	272,557	15	169
79	62	—	8,225	285	9,780	93,945	64,235	236,948	—	—
81	—	—	2,198	2,255	429	6,412	647	4,661	—	—
82	203	—	2,166	6,683	1,306	7,248	1,715	8,257	—	192
83	46	—	444	3,362	9	1,653	877	2,047	6	—
84	22	—	666	752	478	12,373	5,099	9,643	—	—
85	—	—	188	565	4	1,772	963	1,487	—	—
87	225	—	10,570	4,493	20,056	62,340	47,871	309,274	2,762	205
88	417	—	23,712	2,435	2,912	30,623	8,514	141,519	3	7
89	167	—	9,529	37,196	25,177	266,662	23,957	392,498	158	444
9A	4,502	—	88,836	42,310	125,082	87,520	976,186	741,404	19,781	766
Total	521,881	638,092	795,620	711,926	934,372	1,961,917	3,439,871	6,429,880	872,808	28,224
9B	714	—	153,115	64,644	83,300	49,968	144,191	389,431	574	653
Total	522,596	638,092	948,735	776,570	1,017,672	2,011,886	3,584,062	6,819,311	873,383	28,877

**Foreign trade by State**

The following table shows the value of exports and imports for each State and Territory.

**EXPORTS AND IMPORTS BY STATE**  
(**\$'000**)

State(a)	1983-84		1984-85(p)	
	Exports	Imports	Exports	Imports
New South Wales . . . . .	5,782,194	10,027,686	7,397,313	12,707,157
Victoria . . . . .	5,059,996	8,185,757	6,811,622	10,501,739
Queensland . . . . .	5,473,718	2,086,861	6,602,512	2,319,651
South Australia . . . . .	1,650,070	1,318,740	2,020,943	1,603,122
Western Australia . . . . .	5,335,676	1,935,552	6,269,420	2,155,271
Tasmania . . . . .	774,308	202,786	841,316	389,280
Northern Territory . . . . .	590,463	280,287	569,502	317,101
Australian Capital Territory . . . . .	3,976	23,186	3,272	33,044
State not available . . . . .	110,108	—	123,608	—
<b>Grand Total . . . . .</b>	<b>24,780,510</b>	<b>24,060,866</b>	<b>30,639,506</b>	<b>30,026,364</b>

(a) For imports: State in which entry was lodged. The State of lodgement is not necessarily the State in which the goods were discharged or consumed. For exports: State is State of origin of Australian produce and State of final shipment of re-exported goods. State of origin is defined as the State in which the final stage of production or manufacture occurs. Because of this change in the basis on which statistics by State are derived, figures from 1 July 1978 are not directly comparable with those for previous periods.

**Total import clearances, dutiable clearances, and customs duties collected**

The following table shows the value of total import clearances, total dutiable clearances, and the customs duties collected, together with the ratio of total dutiable clearances to total clearances.

**TOTAL IMPORT CLEARANCES, DUTIABLE CLEARANCES, AND CUSTOMS DUTIES**

		1979-80	1980-81	1981-82	1982-83	1983-84	1984-85(p)
Total import clearances . . . . .	\$'000	16,067,584	18,800,183	22,862,983	21,791,753	23,951,883	29,907,018
Total dutiable clearances . . . . .	"	9,901,224	11,672,235	13,792,526	12,816,851	14,720,206	18,551,873
Total customs duties collected . . . . .	"	1,576,736	1,827,031	2,102,384	2,065,932	2,381,475	2,979,888
Ratio of dutiable clearances to total clearance . . . . .	per cent	61.6	62.1	60.3	58.8	61.5	62.0
Ratio of duties collected to dutiable clearances . . . . .	"	15.9	15.7	15.2	16.1	16.2	16.1

**Excise**

Although excise goods have no immediate bearing on foreign trade, the rate of excise duty is in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Australians Customs Service, it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of customs and excise revenue are shown in Chapter 22, Public Finance. The following table shows the quantities of spirits, beer, tobacco, etc. on which excise duty was paid in Australia.

QUANTITIES OF PRINCIPAL EXCISABLE GOODS ON WHICH EXCISE DUTY WAS PAID: AUSTRALIA

Article	1982-83	1983-84	1984-85(p)
	'000	'000	'000
	litre	litre	litre
Beer . . . . .	1,856,934	1,818,881	1,789,158
	'000	'000	'000
	l al	l al	l al
Spirits—			
Brandy . . . . .	2,223	2,071	2,044
Gin . . . . .	456	432	410
Whisky . . . . .	284	229	214
Rum . . . . .	2,223	2,159	2,284
Liqueurs . . . . .	179	173	163
Vodka . . . . .	690	692	759
Flavoured spirituous liqueurs . . . . .	271	279	373
Other . . . . .	8	2,665	386
<i>Total spirits (potable)</i> . . . . .	<i>6,334</i>	<i>8,700</i>	<i>6,633</i>
	'000 kg	'000 kg	'000 kg
Tobacco . . . . .	1,532	1,487	1,236
Cigars . . . . .	56	47	42
Cigarettes—machine-made . . . . .	26,989	26,669	26,485
	'000	'000	'000
Petrol—	litre	litre	litre
Aviation gasoline—for use in aircraft(a) . . . . .	102,803	111,548	114,755
Aviation gasoline—other(a) . . . . .	14,184	—	—
Gasoline—commercial motor spirit/ethanol blends . . . . .	18	—	—
Gasoline(a) . . . . .	14,974,387	14,908,854	15,361,473
Aviation turbine kerosene(a) . . . . .	1,145,961	1,118,837	1,149,809
Other kerosene . . . . .	1,236	1,670,929	1,839,954
Diesel fuel . . . . .	6,790,675	(b)7,833,961	(b)8,166,804
	doz. packs		
	'000		
Playing cards . . . . .	n.p.	n.p.	—
	'000		
Cigarette papers and tubes . . . . .	n.p.	n.p.	—
	matches		
	'000		
Matches . . . . .	n.p.	n.p.	—
	'000	'000	'000
	litre	litre	litre
Crude petroleum oil, liquid petroleum and liquefied petroleum gas . . . . .	23,593,927	24,098,576	27,303,589
	'000 tonnes	'000 tonnes	'000 tonnes
Coal . . . . .	94,260	100,144	112,882

(a) Includes supplies to Commonwealth Government on which excise was paid. (b) Includes automotive, industrial and marine diesel fuel.

## FOREIGN INVESTMENT

Surveys of foreign investment have been conducted since 1947-48 to obtain particulars of certain types of capital flows to and from Australia. The surveys, when supplemented by other information, provide statistics of foreign investment in enterprises in Australia and in Australian government securities, as well as statistics of Australian investment in enterprises abroad and in foreign government securities. Particulars of investment income from most of those classes of investment are also obtained from the surveys.

Certain types of foreign investment are not included in the statistics which follow. Reserves, provisions and similar non-debt liabilities, investment in real estate (except when made through companies or, in other identified cases, when relevant information is available) and loans between Australian individuals and non-resident individuals are not covered. Non-resident deposits in, and foreign borrowings by, Australian trading banks are excluded from foreign investment statistics and are included instead in the non-official monetary item in the balance of payments capital account. Short-term trade credit owing to unrelated enterprises abroad is also excluded, but is included in the trade credit item of the balance of payments capital account.

In the tables which classify investment in Australia according to country of origin, the investment is shown as an inflow from the country of domicile of the foreign investor to whom the enterprises in Australia have the immediate liability. Income payable on foreign investment is classified on the same basis. Country classifications used in relation to Australian investment abroad, and income receivable thereon, attempt to reflect the country in which the investment was made.

Generally, the statistical unit used in foreign investment statistics is the group of enterprises related in terms of Section 7 of the *Companies Act 1981*. This unit is classified by industry on the basis of the major activity of the group as a whole. It should be noted that, because of the broad range of activities of many of the groups covered by these statistics, the classification of foreign investment by industry should be interpreted with some caution. In particular, the classification does not necessarily reflect the industry in which the funds are ultimately employed.

The following are explanatory notes relating to some of the terms used in the tables:

*Borrowings.* corporate securities (other than corporate equities), loans, advances, deposits, debentures, notes, bank overdrafts drawn, mortgages, trade credit owing to unrelated foreign enterprises for imports with a contractual maturity of over six months.

*Branches.* Offices in Australia of enterprises incorporated abroad *or* offices in separate foreign countries of enterprises incorporated in Australia. Australian branches of foreign enterprises *include* other Australian offices of foreign enterprises where a branch register is maintained in Australia, but *exclude* enterprises in Australia which are incorporated abroad but which have no business operations in Australia other than an account with a bank in Australia. Foreign branches of enterprises in Australia *exclude* foreign enterprises which are incorporated in Australia but which have no business operations abroad other than an account with a foreign bank. However, the short-term assets represented by the bank accounts abroad are included as Australian portfolio investment abroad for those companies included in the surveys of foreign investment.

*Corporate equities:* ordinary shares or voting stock.

*Direct investment.* All investment in branches and subsidiaries by direct investors, i.e. head offices of branches, direct shareholders in subsidiaries and other related enterprises.

*Enterprises.* Incorporated and unincorporated businesses and other organisations including public enterprises, but *excluding* enterprises which have no business operations in a country other than an account with a bank in that country.

*Foreign residents.* Any individual, enterprise or other organisation domiciled in a country other than Australia. Includes Norfolk Island and other external territories of Australia. Foreign branches and subsidiaries of enterprises in Australia are also regarded as being foreign residents.

*Portfolio investment and institutional loans.* Investment in enterprises other than direct investment, i.e. investment other than investment by related enterprises in branches and subsidiaries. Includes both corporate equities and borrowings.

*Subsidiaries.* An *Australian subsidiary* of a foreign enterprise is an enterprise in Australia, other than a branch, in which:

- (a) a single foreign resident (individual or enterprise) or a group of related enterprises in one foreign country holds 25 per cent or more of the equity, or, if this condition does not apply,

(b) residents of one foreign country combined hold 50 per cent or more of the equity, together with other enterprises in Australia which are subsidiaries (in terms of Section 7 of the *Companies Act 1981*) of the Australian subsidiary referred to above.

A *foreign subsidiary* of an enterprise in Australia is a foreign enterprise other than a branch, in which an enterprise in Australia holds 25 per cent or more of the equity. In principle, foreign enterprises in which the combined Australian shareholding is 50 per cent or more would also be included, but it is not practicable to ascertain the total investment by Australian shareholders in individual foreign enterprises.

*Undistributed profits of subsidiaries.* Equity of direct investors in the net earnings of an enterprise during the year, less tax payable on those earnings and less dividends declared during the year whether relating to earnings of the same year or not. Net earnings are, in general, based on income for taxation purposes. However, certain deductions allowable for taxation purposes (e.g. mining and petroleum exploration expenditure, Export Market Development Allowance, Investment Allowance for Manufacturing Plant, previous year's losses, etc.) are not deducted in calculating net earnings. Undistributed profits of Australian subsidiaries also include undistributed income accruing to the subsidiary from related enterprises in Australia.

*Unremitted profits of branches.* Net earnings (after tax) during the year, less remittances of earnings to the head office during the year, irrespective of the year to which the earnings relate. Net earnings of branches are, in general, calculated in a similar way to those for subsidiaries. Also included is undistributed income accruing to the branch from other enterprises related to the branch.

More details on foreign investment in Australia and Australian investment abroad are contained in the annual publication *Foreign Investment, Australia* (5305.0)

#### Foreign investment in enterprises in Australia

The level of foreign investment in enterprises in Australia in recent years is shown in the first table. The two following tables show the inflow of foreign investment each year and the income payable to foreign residents respectively.

LEVEL OF FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY TYPE OF INVESTMENT  
(\$ million)

At 30 June	Direct investment		Portfolio investment and institutional loans		Totals	
	Corporate equities (a)	Other(b)	Corporate equities (a)	Borrowings	Corporate equities (a)	Other
1979 . . . . .	4,401	5,638	860	4,289	5,261	9,928
1980 . . . . .	4,737	6,262	1,074	5,100	5,811	11,362
1981 . . . . .	6,005	7,498	1,520	7,319	7,526	14,817
1982 . . . . .	6,830	9,404	1,849	14,370	8,679	23,774
1983 . . . . .	7,649	10,693	2,337	23,178	9,987	33,871
1984 . . . . .	8,002	12,269	2,650	29,411	10,651	41,681

(a) Paid up value only. (b) Includes branch liabilities to head office, intercompany indebtedness, and borrowings.

INFLOW OF FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY TYPE OF INVESTMENT  
(\$ million)

Year	Direct investment			Portfolio investment and institutional loans				
	Undistributed income	Corporate equities	Other (a)	Total	Corporate equities	Borrowings	Total	Total
1978-79 . . . . .	824	-77	609	1,356	131	489	620	1,976
1979-80 . . . . .	1,018	34	485	1,538	710	833	1,543	3,081
1980-81 . . . . .	829	529	1,030	2,389	1,307	2,372	3,679	6,068
1981-82 . . . . .	358	-134	2,118	2,342	659	6,547	7,206	9,548
1982-83 . . . . .	-574	391	1,082	900	857	7,219	8,076	8,976
1983-84 . . . . .	591	218	1,232	2,042	537	6,110	6,647	8,689

(a) Includes branch liabilities to head office, intercompany indebtedness, and borrowings. Minus sign (-) denotes withdrawal of investment.



**INCOME PAYABLE ON FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY TYPE OF INCOME (\$ million)**

Year	<i>Income payable abroad on direct investment</i>					<i>Income payable abroad on portfolio investment and institutional loans</i>			
	<i>Distributed income</i>					<i>Dividends payable</i>	<i>Interest payable</i>	<i>Total</i>	<i>Total</i>
	<i>Undistributed income</i>	<i>Remitted profits of branches</i>	<i>Dividends payable</i>	<i>Interest payable</i>	<i>Total</i>				
1978-79 . . . . .	824	295	288	131	1,538	87	312	399	1,938
1979-80 . . . . .	1,018	391	391	175	1,974	98	419	517	2,491
1980-81 . . . . .	829	368	454	169	1,820	187	532	719	2,538
1981-82 . . . . .	358	357	561	243	1,520	171	1,047	1,219	2,739
1982-83 . . . . .	-574	427	496	286	635	176	1,809	1,985	2,620
1983-84 . . . . .	591	591	525	371	2,079	249	2,422	2,671	4,750

In the following table, foreign investment in enterprises in Australia, and associated income flows, are classified by country.

**FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY COUNTRY (\$ million)**

Year	<i>EEC</i>					<i>Japan</i>	<i>ASEAN (b)</i>	<i>Other countries</i>	<i>Total</i>
	<i>United Kingdom</i>	<i>Other (a)</i>	<i>Switzerland</i>	<i>U.S.A.</i>	<i>Canada</i>				

**LEVELS OF FOREIGN INVESTMENT**

At 30 June—	<i>Corporate equities (c)</i>								
	<i>United Kingdom</i>	<i>Other (a)</i>	<i>Switzerland</i>	<i>U.S.A.</i>	<i>Canada</i>	<i>Japan</i>	<i>ASEAN (b)</i>	<i>Other countries</i>	<i>Total</i>
1979 . . . . .	2,109	322	182	1,589	121	341	54	543	5,261
1980 . . . . .	2,241	432	228	1,640	152	435	67	615	5,811
1981 . . . . .	2,891	634	300	2,096	185	568	94	757	7,526
1982 . . . . .	3,292	766	309	2,452	203	688	119	852	8,679
1983 . . . . .	4,088	952	348	2,452	222	805	167	953	9,987
1984 . . . . .	4,286	1,050	359	2,451	282	850	244	1,129	10,651

At 30 June—	<i>Other</i>								
	<i>United Kingdom</i>	<i>Other (a)</i>	<i>Switzerland</i>	<i>U.S.A.</i>	<i>Canada</i>	<i>Japan</i>	<i>ASEAN (b)</i>	<i>Other countries</i>	<i>Total</i>
1979 . . . . .	2,459	1,285	422	3,431	230	708	158	1,234	9,928
1980 . . . . .	2,713	1,462	439	4,031	277	914	311	1,216	11,362
1981 . . . . .	3,552	1,702	442	5,222	388	1,348	632	1,531	14,817
1982 . . . . .	5,453	2,361	697	7,343	412	2,359	2,461	2,688	23,774
1983 . . . . .	6,867	3,230	884	9,479	476	5,164	3,782	3,989	33,871
1984 . . . . .	7,814	3,946	1,041	11,124	469	6,480	5,937	4,869	41,681

**INFLOW OF FOREIGN INVESTMENT**

1978-79 . . . . .	837	89	60	720	-19	279	56	-47	1,976
1979-80 . . . . .	1,022	402	107	724	52	422	160	191	3,081
1980-81 . . . . .	1,995	549	354	1,300	135	788	387	559	6,068
1981-82 . . . . .	2,655	562	218	1,791	71	1,238	1,813	1,201	9,548
1982-83 . . . . .	2,166	930	215	827	30	2,671	1,137	1,001	8,976
1983-84 . . . . .	2,164	693	219	1,009	91	1,388	2,176	949	8,689

**INCOME PAYABLE ON FOREIGN INVESTMENT**

1978-79 . . . . .	782	84	41	856	11	60	7	95	1,938
1979-80 . . . . .	837	91	53	1,254	-15	121	16	134	2,491
1980-81 . . . . .	785	108	58	1,221	66	129	29	143	2,538
1981-82 . . . . .	919	144	50	1,067	68	220	106	164	2,739
1982-83 . . . . .	939	132	66	641	20	290	224	308	2,620
1983-84 . . . . .	1,386	306	93	1,525	134	539	390	377	4,750

(a) Includes Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands. (b) Includes Indonesia, Malaysia, Philippines, Singapore and Thailand; also includes Brunei from 1 January 1984. (c) Paid up value only. Minus sign (-) denotes withdrawal of investment.

In the following table, foreign investment in enterprises in Australia, and associated income flows, are classified by industry.

FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA, BY, INDUSTRY  
(\$ million)

Year	ASIC Division							Total
	Mining (Div B)	Manu- facturing (Div C)	Electricity & water (Div D)	Wholesale and retail trade (Div F)	Finance property & business services (Div I)	Other industries	Unall- located (a)	
LEVELS OF FOREIGN INVESTMENT								
<i>Corporate equities (b)</i>								
At 30 June—								
1979 . . . . .	719	2,322	—	1,072	844	304	—	5,261
1980 . . . . .	844	2,439	1	1,153	1,045	329	—	5,811
1981 . . . . .	1,323	2,868	3	1,580	1,374	378	—	7,526
1982 . . . . .	1,525	3,262	4	1,729	1,725	434	—	8,679
1983 . . . . .	1,879	3,343	4	2,306	1,920	535	—	9,987
1984 . . . . .	2,164	3,445	4	2,419	2,006	613	—	10,651
<i>Other</i>								
At 30 June—								
1979 . . . . .	2,236	2,404	368	1,962	1,945	1,012	—	9,928
1980 . . . . .	2,611	2,310	685	2,329	2,181	1,239	—	11,362
1981 . . . . .	3,564	2,906	933	2,809	3,076	1,508	—	14,817
1982 . . . . .	5,755	5,025	2,039	3,752	4,765	2,425	—	23,774
1983 . . . . .	8,885	6,736	4,775	4,153	5,995	3,270	—	33,871
1984 . . . . .	9,682	7,576	6,067	5,594	8,730	4,032	—	41,681
INFLOW OF FOREIGN INVESTMENT								
1978-79. . . . .	68	594	238	735	116	225	—	1,976
1979-80. . . . .	529	473	319	913	541	306	—	3,081
1980-81. . . . .	1,324	1,493	303	1,345	1,242	361	—	6,068
1981-82. . . . .	1,728	2,812	1,053	1,113	1,952	890	—	9,548
1982-83. . . . .	2,710	1,137	2,464	557	1,429	679	—	8,976
1983-84. . . . .	107	1,447	1,249	1,843	3,268	775	—	8,689
INCOME PAYABLE ON FOREIGN INVESTMENT (a)								
1978-79. . . . .	349	588	—	421	133	47	400	1,938
1979-80. . . . .	497	599	—	635	180	63	517	2,491
1980-81. . . . .	472	627	—	507	150	64	718	2,538
1981-82. . . . .	180	743	—	368	200	29	1,219	2,739
1982-83. . . . .	138	27	—	79	355	36	1,985	2,620
1983-84. . . . .	421	751	—	375	479	53	2,671	4,750

(a) Income payable on portfolio investment and institutional loans is not available by industry and is included in the unallocated column. (b) Paid-up value only. Minus sign (-) denotes withdrawal of investment.

**Australian investment in enterprises abroad**

The following tables show the levels and outflow of Australian investment in enterprises abroad in recent years, and associated income flows.

LEVEL OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES, BY TYPE OF INVESTMENT  
(\$ million)

At 30 June	Direct investment		Portfolio investment and institutional loans		Totals	
	Corporate equities (a)	Other (b)	Corporate equities (a)	Borrowings	Corporate equities (a)	Other
1979 . . . . .	631	891	92	171	723	1,061
1980 . . . . .	872	1,043	118	276	990	1,318
1981 . . . . .	942	1,208	147	142	1,089	1,350
1982 . . . . .	1,231	1,607	445	178	1,676	1,785
1983 . . . . .	1,591	1,944	606	308	2,197	2,253
1984 . . . . .	2,607	2,077	858	621	3,465	2,697

(a) Paid-up value only. (b) Includes branch liabilities to head office, intercompany indebtedness and borrowings.

OUTFLOW OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES, BY TYPE OF INVESTMENT  
(\$ million)

Year	Direct investment				Portfolio investment and institutional loans	Total
	Undis-tributed income	Corporate equities	Other(a)	Total		
1978-79 . . . . .	160	52	14	225	32	256
1979-80 . . . . .	231	88	134	452	117	569
1980-81 . . . . .	199	133	124	456	15	470
1981-82 . . . . .	106	174	391	672	379	1,051
1982-83 . . . . .	246	311	237	794	673	1,467
1983-84 . . . . .	296	927	297	1,519	427	1,946

(a) Includes branch liabilities to head office, intercompany indebtedness and borrowings.

INCOME RECEIVABLE ON AUSTRALIAN DIRECT INVESTMENT IN FOREIGN ENTERPRISES, BY TYPE OF INCOME(a)  
(\$ million)

Year	Distributed income					Total
	Undis-tributed income	Remitted profits of branches	Dividends of subsidiaries	Interest	Total	
1978-79 . . . . .	160	52	88	7	147	306
1979-80 . . . . .	231	71	123	8	201	432
1980-81 . . . . .	199	51	145	5	201	400
1981-82 . . . . .	106	64	117	10	192	298
1982-83 . . . . .	246	54	138	16	208	454
1983-84 . . . . .	296	68	151	40	259	555

(a) Direct investment only. Minus sign (-) denotes repatriation.

In the following table, Australian investment in foreign enterprises, and associated income flows, are classified by country.

AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES, BY COUNTRY  
(\$ million)

Year	E.E.C.		New Zealand	U.S.A.	Papua New Guinea	ASEAN (b)	Other Countries	Total
	United Kingdom	Other(a)						

LEVELS OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES

At 30 June—	Corporate equities(c)							
	United Kingdom	Other(a)	New Zealand	U.S.A.	Papua New Guinea	ASEAN (b)	Other Countries	Total
1979 . . . . .	61	22	148	84	161	95	151	723
1980 . . . . .	92	25	181	123	293	100	176	990
1981 . . . . .	110	27	160	165	300	109	217	1,089
1982 . . . . .	142	33	183	482	370	208	259	1,676
1983 . . . . .	177	45	231	662	380	238	463	2,197
1984 . . . . .	264	47	253	1,607	425	246	623	3,465
	Other							
1979 . . . . .	175	66	161	189	140	94	236	1,061
1980 . . . . .	269	86	166	246	144	126	282	1,318
1981 . . . . .	196	75	177	318	140	156	288	1,350
1982 . . . . .	269	142	296	419	131	235	294	1,785
1983 . . . . .	250	152	345	573	129	253	452	2,253
1984 . . . . .	240	181	320	679	144	591	543	2,697

AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES, BY COUNTRY—*continued*  
 (\$ million)

Year	E.E.C.		New Zealand	U.S.A.	Papua New Guinea	ASEAN (b)	Other Countries	Total
	United Kingdom	Other (a)						
<b>OUTFLOW OF AUSTRALIAN INVESTMENT IN FOREIGN ENTERPRISES</b>								
1978-79	18	7	17	84	16	46	68	256
1979-80	165	27	74	123	55	38	86	569
1980-81	12	19	62	216	-20	91	93	470
1981-82	191	20	188	451	46	63	93	1,051
1982-83	115	22	168	699	21	155	287	1,467
1983-84	90	40	117	1,256	91	261	91	1,946
<b>INCOME RECEIVABLE ON AUSTRALIAN DIRECT INVESTMENT IN FOREIGN ENTERPRISES (f)</b>								
1978-79	42	(d)	66	15	63	37	(e) 83	306
1979-80	57	13	87	18	119	42	96	432
1980-81	89	21	94	5	33	69	90	400
1981-82	8	6	113	-16	37	74	77	298
1982-83	133	(d)	126	5	33	80	(e) 77	454
1983-84	110	(d)	154	8	77	134	(e) 73	555

(a) Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands. (b) Indonesia, Malaysia, Philippines, Singapore and Thailand; also includes Brunei from 1 January 1984. (c) Paid-up value only. (d) Not available; included in 'Other Countries'. (e) Includes 'Other E.E.C.' (f) Details of income receivable are not available for portfolio investment and institutional loans. Minus sign (-) denotes repatriation of investment.

## BALANCE OF PAYMENTS

Broadly speaking, the Australian balance of payments is a statistical statement designed to provide a systematic record of Australia's economic transactions with the rest of the world. It may be described as a system of consolidated accounts in which the accounting entity is the Australian economy and the entries refer to all economic transactions between residents of Australia and residents of the rest of the world (non-residents). Such a record is essential to the examination of influences which external factors have on the domestic economy. Balance of payments estimates have always assumed a particular importance in Australia due to the importance of these influences on the Australian economy.

Official estimates of Australia's balance of payments for the period 1928-29 were included in Year Book No. 24, page 755. Except for the war years 1939 to 1945, estimates have since been published at least annually.

Detailed estimates and brief descriptions of the various items included are provided in the annual publication *Balance of Payments, Australia* (5303.0). More timely though less detailed estimates are provided in a quarterly publication *Balance of Payments, Australia* (5302.0) approximately five and a half weeks after the end of each quarter. A monthly publication *Balance of Payments, Australia* (5301.0), showing the major aggregates, is published about eight to nine working days after the end of each month. A comprehensive description of concepts, definitions, data sources and methods used to compile published statistics are contained in the publication *Balance of Payments, Australia: Concepts, Sources and Methods* (5331.0). Changes to concepts, sources and methods since that publication are described in the annual publication *Balance of Payments, Australia* (5303.0) for 1983-84 and in the December quarter 1983 and March quarter 1984 issues of 5302.0.

Balance of payments statements cover a wide range of economic transactions which may be broadly divided into three categories. The first category comprises transactions in goods, services and income between residents of Australia and non-residents. The second category relates to financial transactions involving claims on and liabilities to the rest of the world. Because the statement is constructed on a double entry recording basis, a third category described as unrequited transfers is required to provide offsetting entries for one sided balance of payments transactions, such as gifts in cash and kind which have no 'quid pro quo'. Two changes not arising from transactions—specifically changes in Australia's official reserve assets arising from the allocation (or cancellation) of Special Drawing Rights (SDRs) by the International Monetary Fund (IMF) and the monetisation (or demonetisation) of gold—are included by convention, to make the accounts more analytically useful. The first and third

of the above categories are combined in what is described as the current account and the second category together with the two changes not arising from transactions are shown separately in what is described as the capital account.

Under the internationally accepted conventions of the double entry system, credit entries are used to record exports of goods and services, income receivable and financial transactions involving either a reduction in the country's foreign financial assets or an increase in its foreign liabilities. Conversely, debit entries are used to record imports of goods and services, income payable and financial transactions involving either an increase in foreign financial assets or a decrease in foreign liabilities. Transactions in a double entry accounting system are reflected in pairs of equal credit and debit entries. Any entries that are not automatically paired are matched by special offsetting entries. Such offsetting entries are required in the category of unrequited transfers for one sided balance of payments transactions. Offsets are also required for the other changes not arising from transactions referred to in the previous paragraph.

It follows that, in principle, the net sum of all credit and debit entries is zero. In practice, some transactions are not measured accurately (errors), while others are not measured at all (omissions). Equality between the sum of the credit and debit entries is brought about by the inclusion of a balancing item which reflects net errors and omissions.

In principle, transactions and other changes should be valued in the balance of payments at market prices. However, in practice, transactions are generally valued in the statistics at transactions prices because this basis provides the closest practical approximation to the market price principle. The transactions price is the price at which a transaction is recorded in the accounts of the transactors.

Transactions and other changes recorded in the balance of payments should, in principle, be recorded at the time of change of ownership (either actual or imputed). For the current account this is conceived as the time when ownership of goods changes, services are rendered, when undistributed income of direct investment enterprises is earned, and when interest and dividends become due for payment. In the case of unrequited transfers, those which are imposed by one party on another, such as taxes and fines, should ideally be recorded at the time they become due for payment without penalty; whereas others should be recorded when the goods, services etc. to which they are offsets change ownership. For capital account transactions the time of change of ownership is, by convention, normally taken to be the time at which transactions are entered in the books of the transactors. Entries for loan drawings should be based on actual disbursements and not on commitments or authorisations. Entries for loan repayments should be recorded at the time they become due rather than on the actual payment date.

In practice, the nature of the available data sources is such that the time of recording of transactions will often differ from the time of change of ownership. This is particularly true in the case of transactions in goods which are, in the main, recorded at the time that administrative records relating to the movement of the goods across the customs frontier are processed. Where practical, timing adjustments are made for transactions in certain goods to ensure that they are recorded in the time period in which change of ownership occurs.

In the first table that follows, the global balance of payments is presented in the conventional two column credit and debit accounting format. In the regional table, however, minus signs are used to denote current account debits and capital account debits (i.e. increases in assets or decreases in liabilities) while the absences of sign are used to denote current account credits and capital account credits (i.e. decreases in assets or increases in liabilities).

For current account transactions, entries for exports of goods and entries for imports of goods are recorded as credits and debits respectively. Likewise entries for transportation credits are recorded separately from entries for transportation debits and for most other invisible transactions the credit entries are similarly recorded separately from the debit entries. Current account transactions, in this context, are described as being recorded gross. This treatment is in contrast to the recording of transactions and other changes in the capital account which is on a net basis. This means that, for each capital account item shown in the following table, credit entries are combined with debit entries to arrive at a single net result (either a credit or a debit) for the item concerned.

In principle, the items included in visible trade should include all movable goods, with a few exceptions, the ownership of which changes from residents to non-residents (exports) and from non-residents to residents (imports). Items 4 to 10 which are grouped together under the heading 'invisibles' include services, income and unrequited transfers. Invisible

credits comprise the value of services rendered by residents to non-residents, the income earned by Australian residents from the ownership of foreign financial assets (e.g. dividends and interest) and from the use of copyrights, licences, etc., by non-residents (e.g. royalties), and the offset entries to the value of cash and kind transferred by non-residents to residents without a quid pro quo (unrequited transfers). Invisible debits are composed of similar transactions, but with the roles of resident and non-resident interchanged.

For capital account transactions, the entries for government capital (items 11 to 13) broadly refer to the capital account transactions of the general government sector (i.e. Commonwealth, State and local government authorities and statutory bodies except for government-owned or controlled (public) trading and financial enterprises). Items 14 to 17, which comprise private capital, broadly refer to the capital account transactions of resident individuals, privately owned trading and non-bank financial enterprises and government owned or controlled (public) trading and non-bank financial enterprises.

The transactions of non-official monetary institutions (item 18) broadly cover the capital account transactions of the privately and government owned trading banks mainly in the form of borrowings (from and by non-residents) and balances (foreign currency held overseas and Australian currency held by non-residents), while item 19, official monetary institutions, covers all capital account transactions with the IMF, all capital account transactions of the Reserve Bank, with foreign central monetary authorities including the Bank for International Settlements; and transactions and all changes (other than those resulting from revaluation) in the holdings of monetary gold and foreign currency assets owned and controlled by the resident central authorities which are available for meeting balance of payments needs.

**BALANCE OF PAYMENTS**  
(*\$ million*)

	1981-82		1982-83		1983-84	
	<i>Credit</i>	<i>Debit</i>	<i>Credit</i>	<i>Debit</i>	<i>Credit</i>	<i>Debit</i>
<b>CURRENT ACCOUNT</b>						
<b>Goods—</b>						
1 Exports f.o.b.(a) . . . . .	19,083	—	20,656	—	23,682	—
2 Imports f.o.b.(a) . . . . .	—	22,376	—	21,705	—	23,497
Balance of trade . . . . .	—	3,293	—	1,049	185	—
<b>Invisibles—</b>						
<b>4 Transportation—</b>						
4.1 Freight on imports . . . . .	—	1,960	—	1,795	—	2,018
4.2 Expenditure of non-resident transport operators . . . . .	1,184	—	1,213	—	1,295	—
4.3 Other transportation . . . . .	910	1,782	972	1,868	978	1,848
5 Travel . . . . .	1,030	1,696	1,113	1,916	1,277	2,177
<b>6 Government—</b>						
<b>6.1 Australian government—</b>						
6.11 Defence expenditure . . . . .	—	121	—	142	—	135
6.12 Other expenditure . . . . .	—	200	—	229	—	252
6.13 Services to non-residents . . . . .	53	—	62	—	69	—
6.2 Foreign governments' expenditure . . . . .	108	—	132	—	138	—
<b>7 Miscellaneous—</b>						
7.1 Business expenses . . . . .	121	182	136	212	156	256
7.2 Other . . . . .	167	240	186	280	206	355
<b>8 Property income—</b>						
<b>8.1 Direct investment—</b>						
8.11 Undistributed . . . . .	106	358	820	—	296	591
8.12 Distributed . . . . .	192	1,162	208	1,209	259	1,488
8.2 Interest on government loans . . . . .	—	370	—	535	—	648
8.3 Royalties and copyrights . . . . .	25	135	25	150	30	165
8.4 Other . . . . .	342	1,304	654	2,070	952	2,757
<b>9 Government transfers—</b>						
9.1 Papua New Guinea . . . . .	—	270	—	292	—	318
9.2 Other foreign aid . . . . .	—	398	—	440	—	462
9.3 Social security cash benefits . . . . .	—	65	—	71	—	83
<b>10 Private transfers—</b>						
10.1 Migrants' funds . . . . .	230	78	240	100	240	108
10.2 Social security cash benefits . . . . .	19	—	20	—	22	—
10.3 Other . . . . .	549	413	688	500	706	527
Balance on current account . . . . .	—	8,992	—	6,389	—	7,379

## BALANCE OF PAYMENTS

BALANCE OF PAYMENTS—*continued*  
(*\$ million*)

	1981-82		1982-83		1983-84	
	Credit	Debit	Credit	Debit	Credit	Debit
<b>CAPITAL ACCOUNT (NET)</b>						
Non-monetary—						
Government—						
11 Securities—						
11.1 Domiciled overseas . . . . .	368	—	582	—	361	—
11.2 Domiciled in Australia . . . . .	172	—	385	—	839	—
12 International development financing institutions . . . . .	—	58	—	67	—	99
13 Other government transactions . . . . .	—	20	—	87	—	479
Private—						
14 Foreign investment in enterprises in Australia—						
14.1 Direct investment—						
14.11 Undistributed income . . . . .	358	—	—	574	591	—
14.12 Other . . . . .	1,984	—	1,473	—	1,450	—
14.2 Portfolio, investment and institutional loans—						
14.21 Public enterprise borrowings . . . . .	1,164	—	2,172	—	2,490	—
14.22 Other . . . . .	6,042	—	5,904	—	4,157	—
15 Australian investment abroad—						
16 15.1 Direct investment—						
15.11 Undistributed income . . . . .	—	106	—	246	—	296
15.12 Other . . . . .	—	566	—	548	—	1,223
15.2 Portfolio investment and institutional loans . . . . .						
16 . . . . .	—	366	—	680	—	434
17 Trade credit n.e.i.—						
17.1 Public enterprises . . . . .	135	—	27	—	—	224
17.2 Other . . . . .	63	—	—	328	224	—
Monetary—						
18 Non-official monetary institutions—						
18.1 Changes in liabilities—						
18.11 Borrowing overseas . . . . .	111	—	328	—	267	—
18.12 Other liabilities . . . . .	43	—	46	—	22	—
18.2 Changes in assets—						
18.21 Advances to non-residents . . . . .	—	27	5	—	10	—
18.22 Foreign currency balances . . . . .	—	21	282	—	—	99
19 Official monetary institutions—						
19.1 Changes in liabilities—						
19.11 Use of IMF credit . . . . .	—	—	37	—	—	37
19.12 Other liabilities . . . . .	6	—	—	12	42	—
19.2 Changes in official reserve assets . . . . .	—	1,364	—	2,460	—	1,855
19.3 Allocation of SDRs . . . . .	—	—	—	—	—	—
19.4 Other transactions . . . . .	4	—	—	1	1	—
Balancing item . . . . .	1,071	—	150	—	1,671	—
<b>Balance on capital account . . . . .</b>	<b>8,992</b>	<b>—</b>	<b>6,389</b>	<b>—</b>	<b>7,379</b>	<b>—</b>

(a) The amounts shown represent the foreign trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation.

BALANCE OF PAYMENTS BY REGIONS  
(\$ million)

	1981-82	1982-83	1983-84
<b>CURRENT ACCOUNT(a)</b>			
<b>Exports f.o.b.(b)—</b>			
United States of America . . . . .	2,064	2,131	2,560
Canada . . . . .	357	259	325
United Kingdom . . . . .	758	1,118	1,100
Germany, Federal Republic . . . . .	453	492	612
Other European Economic Community(c) . . . . .	1,132	1,335	1,492
Japan . . . . .	5,313	5,920	6,513
New Zealand . . . . .	1,007	1,114	1,393
Other OECD(d) . . . . .	233	225	296
<b>Total OECD</b> . . . . .	<b>11,317</b>	<b>12,594</b>	<b>14,291</b>
ASEAN . . . . .	1,612	1,709	2,031
Papua New Guinea . . . . .	405	494	480
Centrally Planned Economies(e) . . . . .	1,382	1,306	1,500
Other countries . . . . .	4,367	4,553	5,380
<b>Total Exports</b> . . . . .	<b>19,083</b>	<b>20,656</b>	<b>23,682</b>
<b>Imports f.o.b.(b)—</b>			
United States of America . . . . .	-5,235	-4,772	-5,043
Canada . . . . .	-582	-433	-452
United Kingdom . . . . .	-1,677	-1,527	-1,645
Germany, Federal Republic . . . . .	-1,284	-1,266	-1,372
Other European Economic Community(c) . . . . .	-1,541	-1,557	-1,892
Japan . . . . .	-4,420	-4,520	-5,297
New Zealand . . . . .	-719	-685	-907
Other OECD(d) . . . . .	-851	-752	-943
<b>Total OECD</b> . . . . .	<b>-16,307</b>	<b>-15,511</b>	<b>-17,551</b>
ASEAN . . . . .	-1,455	-1,498	-1,232
Papua New Guinea . . . . .	-69	-68	-77
Centrally Planned Economies(e) . . . . .	-379	-371	-382
Other countries . . . . .	-4,165	-4,257	-4,255
<b>Total imports</b> . . . . .	<b>-22,376</b>	<b>-21,705</b>	<b>-23,497</b>
<b>Invisibles (net)—</b>			
United States of America . . . . .	-1,498	-744	-1,370
Canada . . . . .	-82	-8	-113
United Kingdom . . . . .	-1,263	-1,156	-1,891
Germany, Federal Republic . . . . .	-173	-213	-257
Other European Economic Community(c) . . . . .	-484	-423	-627
Japan . . . . .	-453	-556	-954
New Zealand . . . . .	124	56	153
Other OECD(d) . . . . .	-286	-307	-340
<b>Total OECD</b> . . . . .	<b>-4,115</b>	<b>-3,352</b>	<b>-5,399</b>
ASEAN . . . . .	-432	-582	-670
Papua New Guinea . . . . .	-156	-208	-179
Centrally Planned Economies(e) . . . . .	-33	-68	-107
Other countries . . . . .	-963	-1,131	-1,209
<b>Total invisibles (net)</b> . . . . .	<b>-5,698</b>	<b>-5,340</b>	<b>-7,564</b>
<b>Balance on current account—</b>			
United States of America . . . . .	-4,670	-3,385	-3,853
Canada . . . . .	-307	-182	-240
United Kingdom . . . . .	-2,181	-1,565	-2,436
Germany, Federal Republic . . . . .	-1,004	-987	-1,017
Other European Economic Community(c) . . . . .	-893	-645	-1,022
Japan . . . . .	-440	-844	-262
New Zealand . . . . .	-412	-485	-639
Other OECD(d) . . . . .	-904	-834	-987
<b>Total OECD</b> . . . . .	<b>-9,105</b>	<b>-6,269</b>	<b>-8,659</b>
ASEAN . . . . .	-274	-371	129
Papua New Guinea . . . . .	180	218	224
Centrally Planned Economies(e) . . . . .	970	867	1,011
Other countries . . . . .	-761	-835	-84
<b>Balance on current account</b> . . . . .	<b>-8,992</b>	<b>-6,389</b>	<b>-7,379</b>

For footnotes see end of table



BALANCE OF PAYMENTS  
BALANCE OF PAYMENTS BY REGIONS—*continued*  
(\$ million)

	1981-82	1982-83	1983-84
<b>CAPITAL ACCOUNT (NET) (a)</b>			
<b>Non-monetary sector—</b>			
<b>Government capital movements—</b>			
United States of America . . . . .	-360	-52	-341
Canada . . . . .	—	—	1
United Kingdom . . . . .	-75	250	175
Germany, Federal Republic . . . . .	91	19	462
Other European Economic Community(c) . . . . .	-3	95	-13
Japan . . . . .	286	568	373
New Zealand . . . . .	—	—	—
Other OECD(d) . . . . .	564	—	-119
Total OECD . . . . .	502	879	538
ASEAN . . . . .	—	—	—
Papua New Guinea . . . . .	4	4	3
Centrally Planned Economies(e) . . . . .	—	—	—
Other countries . . . . .	-45	-70	81
<i>Total government capital movements</i> . . . . .	<i>462</i>	<i>813</i>	<i>622</i>
<b>Foreign investment in enterprises in Australia—</b>			
United States of America . . . . .	1,791	828	1,010
Canada . . . . .	71	29	91
United Kingdom . . . . .	2,655	2,167	2,163
Germany, Federal Republic . . . . .	158	288	-67
Other European Economic Community(c) . . . . .	403	643	760
Japan . . . . .	1,238	2,671	1,387
New Zealand . . . . .	-19	85	110
Other OECD(d) . . . . .	255	240	247
Total OECD . . . . .	6,552	6,951	5,701
ASEAN . . . . .	1,812	1,138	2,176
Papua New Guinea . . . . .	-2	-2	—
Centrally Planned Economies(e) . . . . .	6	-3	—
Other countries . . . . .	1,180	892	811
<i>Total foreign investment in enterprises in Australia</i> . . . . .	<i>9,548</i>	<i>8,975</i>	<i>8,688</i>
<b>Other private capital movements—</b>			
United States of America . . . . .	-306	-852	-1,293
Canada . . . . .	4	-38	19
United Kingdom . . . . .	-217	-114	28
Germany, Federal Republic . . . . .	—	-78	-22
Other European Economic Community(c) . . . . .	35	23	-68
Japan . . . . .	-7	-1	53
New Zealand . . . . .	-213	-163	-114
Other OECD(d) . . . . .	3	-3	33
Total OECD . . . . .	-703	-1,226	-1,364
ASEAN . . . . .	—	-194	-319
Papua New Guinea . . . . .	-99	-123	-150
Centrally Planned Economies(e) . . . . .	14	-3	195
Other countries . . . . .	-53	-229	-316
<i>Total other private capital movements</i> . . . . .	<i>-840</i>	<i>-1,774</i>	<i>-1,953</i>
<b>Total non-monetary sector transactions—</b>			
United States of America . . . . .	1,125	-75	-624
Canada . . . . .	74	-9	111
United Kingdom . . . . .	2,363	2,303	2,366
Germany, Federal Republic . . . . .	249	229	373
Other European Economic Community(c) . . . . .	435	761	679
Japan . . . . .	1,516	3,238	1,813
New Zealand . . . . .	-232	-78	-4
Other OECD(d) . . . . .	823	236	161
Total OECD . . . . .	6,352	6,604	4,875
ASEAN . . . . .	1,811	945	1,857
Papua New Guinea . . . . .	-97	-121	-147
Centrally Planned Economies(e) . . . . .	20	-6	195
Other countries . . . . .	1,082	594	576
<i>Total non-monetary sector transactions</i> . . . . .	<i>9,170</i>	<i>8,014</i>	<i>7,357</i>

For footnotes see end of table.

## BALANCE OF PAYMENTS

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BALANCE OF PAYMENTS BY REGIONS—*continued*  
(\$ million)

	1981-82	1982-83	1983-84
<b>CAPITAL ACCOUNT (NET)(a)</b>			
Monetary sector transactions—			
Net official monetary movements(f) . . . . .	-1,354	-2,436	-1,850
Non-official monetary sector transactions(f) . . . . .	106	661	201
Balancing item(f) . . . . .	1,071	150	1,671
<b>Balance on capital account(f)</b> . . . . .	<b>8,992</b>	<b>6,389</b>	<b>7,379</b>

(a) For current account entries minus sign(-) denotes a debit, for capital account items minus sign(-) denotes an increase in foreign financial assets or a decrease in foreign liabilities. (b) The amounts shown represent foreign trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation. (c) Belgium, Luxembourg, Denmark, France, Ireland, Italy, Netherlands, Greece. (d) Spain, Turkey, Austria, Finland, Iceland, Norway, Portugal, Sweden, Switzerland. (e) Albania, Bulgaria, China, Czechoslovakia, Democratic Peoples' Republic of Korea, German Democratic Republic, Hungary, Mongolia, Poland, Romania, the Socialist Republic of Vietnam, and the Union of Soviet Socialist Republics. (f) No regional split is available for these items.

**International reserves****OFFICIAL RESERVE ASSETS(a)**

(Source: Reserve Bank of Australia)

(\$ million)

	30 June		
	1983	1984	1985
Official reserve assets—			
Foreign exchange—			
United States dollars . . . . .	5,642	6,771	5,802
Others . . . . .	1,258	1,840	3,305
Special Drawing Rights . . . . .	105	166	360
Reserve position in IMF . . . . .	—	162	278
Gold . . . . .	3,744	3,478	3,772
<b>Total . . . . .</b>	<b>10,748</b>	<b>12,417</b>	<b>13,517</b>

(a) SDRs, and Australia's reserve position in the IMF are based on the IMF basket valuation for the SDR, which is published in terms of US dollars crossed with the representative rate for the Australian dollar in terms of the US dollar. Gold is valued at the average London gold price for the month, converted to Australian dollars at the market rate of exchange applying on the last day of the month. The foreign currency value of all other overseas assets has been based, where applicable, on market quotations. Accrued interest is normally taken into account. Conversion to Australian dollar equivalent is based on market rates of exchange. Figures for official reserve assets as at 30 June 1985 are not fully comparable with earlier data due to the changes in accounting procedures.

## VALUES OF EXPORTS AND IMPORTS OF GOODS (BALANCE OF PAYMENTS BASIS) AT CONSTANT PRICES

The following tables show annual values of Australian exports and imports of goods at current and constant (average 1979-80) prices. These estimates are compiled on a balance of payments basis within the framework of the Australian Export Commodity Classification (AECC) and the Australian Import Commodity Classification (AICC). Quarterly figures in original and seasonally adjusted terms are published regularly in the publication *Exports and Imports (Balance or Payments Basis) at Constant Prices, Australia* (5332.0).

A constant price estimate may be thought of as being derived by expressing the current price value of each component transaction as the product of a price and a quantity and by substituting for each actual current price the corresponding price in the chosen base year. There are, however, many transactions recorded in statistics of overseas trade for which it is not possible to apply such an approach. In such cases it is necessary to make assumptions and approximations (e.g. revaluing by means of the price index which is considered to be most closely related to the commodity involved). The published estimates at constant prices should be viewed in this light.

Estimates at current prices are often divided by their corresponding estimates at constant prices to give measures of price change (generally referred to as implicit price deflators (IPDs)). IPDs are derived measures and are not normally the direct price measures by which current price estimates are converted to estimates at constant prices. A more detailed discussion of the nature of IPDs is presented in Appendix B of the publication *Australian National Accounts: Concepts, Sources and Methods* (5216.0)

The published components of exports of goods f.o.b. and imports of goods f.o.b. consist of varying numbers of AECC and AICC divisions and/or sections as shown below.

<i>Exports</i>	<i>Section or division of AECC</i>	<i>Imports</i>	<i>Section or division of AICC</i>
Rural—		Food, beverages and tobacco	0, 1
Meat and meat preparations	01	Fuels	3
Cereal grains and cereal preparations	04	Basic materials	2, 4
Sugar, sugar preparations and honey	06	Chemicals (incl. plastics)	5
Wool and sheepskins	Parts of 21, 26 and 65	Textiles, fabrics, etc.	65
Other rural	00, 02, 03, 05, 07 to 09, 21 (part), 22 to 25, 26 (part), 29, 4	Metals and metal manufactures	67 to 69
		Machinery and transport equipment	7
		Other imports	61 to 64, 66 8, 9
Non-rural—			
Metal ores and minerals	27, 28		
Mineral fuels—			
Coal, coke and briquettes	32		
Other	33, 34		
Metals and metal manufactures	67 to 69		
Machinery and transport equipment	7		
Other non-rural	1, 5, 61 to 64, 65 (part), 66, 8, 9		

#### EXPORTS OF GOODS (BALANCE OF PAYMENTS BASIS) AT CURRENT AND AVERAGE 1979-80 PRICES

	\$ million					
	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
	<i>At current prices</i>					
Rural exports f.o.b.						
Meat and meat preparations . . . . .	1,729	1,593	1,380	1,675	1,393	1,373
Cereal grains and cereal preparations . . . . .	2,957	2,339	2,484	1,849	2,817	4,079
Sugar, sugar preparations and honey . . . . .	719	1,199	784	608	676	629
Wool and sheepskins . . . . .	1,790	1,920	1,875	1,789	2,000	2,571
Other (dairy produce, fruit, etc.) . . . . .	1,653	1,636	1,752	1,984	2,131	2,431
<i>Total rural</i> . . . . .	<i>8,847</i>	<i>8,687</i>	<i>8,275</i>	<i>7,905</i>	<i>9,017</i>	<i>11,083</i>
Non-rural exports f.o.b.						
Metal ores and minerals . . . . .	3,306	3,409	3,456	3,852	4,229	4,743
Mineral fuels—						
Coal, coke and briquettes . . . . .	1,686	1,981	2,295	3,078	3,338	4,681
Other (a) . . . . .	427	517	867	1,058	1,437	2,333
Metals and metal manufactures . . . . .	2,027	1,686	1,627	1,912	2,156	2,545
Machinery and transport equipment . . . . .	798	912	1,053	1,150	1,379	1,658
Other non-rural (b) . . . . .	1,498	1,528	1,510	1,701	2,126	2,488
<i>Total non-rural</i> . . . . .	<i>9,741</i>	<i>10,032</i>	<i>10,808</i>	<i>12,751</i>	<i>14,665</i>	<i>18,448</i>
<b>Total exports f.o.b.</b> . . . . .	<b>18,589</b>	<b>18,718</b>	<b>19,083</b>	<b>20,656</b>	<b>23,682</b>	<b>29,531</b>
	<i>At average 1979-80 prices</i>					
Rural exports f.o.b.						
Meat and meat preparations . . . . .	1,729	1,654	1,596	1,790	1,312	1,218
Cereal grains and cereal preparations . . . . .	2,957	2,041	2,236	1,607	2,274	3,155
Sugar, sugar preparations and honey . . . . .	719	785	784	815	761	830
Wool and sheepskins . . . . .	1,790	1,819	1,701	1,603	1,700	1,966
Other (dairy produce, fruit, etc.) . . . . .	1,653	1,573	1,652	1,734	1,660	1,796
<i>Total rural</i> . . . . .	<i>8,847</i>	<i>7,872</i>	<i>7,969</i>	<i>7,549</i>	<i>7,707</i>	<i>8,965</i>
Non-rural exports f.o.b.						
Metal ores and minerals . . . . .	3,306	3,076	2,823	2,910	3,199	3,252
Mineral fuels—						
Coal, coke and briquettes . . . . .	1,686	1,824	1,797	2,050	2,394	3,088
Other (a) . . . . .	427	451	748	811	1,099	1,524
Metals and metal manufactures . . . . .	2,027	1,843	1,953	2,214	2,199	2,353
Machinery and transport equipment . . . . .	798	831	857	832	936	1,021
Other non-rural (b) . . . . .	1,498	1,503	1,475	1,547	1,851	2,167
<i>Total non-rural</i> . . . . .	<i>9,741</i>	<i>9,528</i>	<i>9,653</i>	<i>10,364</i>	<i>11,678</i>	<i>13,405</i>
<b>Total exports f.o.b.</b> . . . . .	<b>18,589</b>	<b>17,400</b>	<b>17,622</b>	<b>17,913</b>	<b>19,385</b>	<b>22,370</b>

(a). Until 1980-81 excludes division 34.

(b) Until 1980-81 includes division 34.

IMPORTS OF GOODS (BALANCE OF PAYMENTS BASIS) AT CURRENT AND AVERAGE 1979-80  
PRICES  
\$ million

	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
	<i>At current prices</i>					
Food, beverages and tobacco . . . . .	791	818	902	1,017	1,211	1,476
Fuels . . . . .	2,091	2,715	2,987	3,087	2,209	2,322
Basic materials . . . . .	777	821	846	728	873	1,052
Chemicals (incl. plastics) . . . . .	1,552	1,563	1,813	1,769	2,155	2,571
Textiles, fabrics, etc.. . . . .	950	978	1,094	1,009	1,304	1,452
Metals and metal manufactures . . . . .	864	1,052	1,357	1,193	1,143	1,462
Machinery and transport equipment . . . . .	5,573	7,568	9,015	8,595	9,261	12,852
Other imports. . . . .	3,234	3,663	4,364	4,307	5,341	6,944
<b>Total imports of goods f.o.b. . . . .</b>	<b>15,831</b>	<b>19,177</b>	<b>22,376</b>	<b>21,705</b>	<b>23,497</b>	<b>30,131</b>
	<i>At average 1979-80 prices</i>					
Food, beverages and tobacco . . . . .	791	830	932	936	1,051	1,166
Fuels . . . . .	2,091	2,008	2,013	1,901	1,454	1,400
Basic materials . . . . .	777	802	836	683	767	873
Chemicals (incl. plastics) . . . . .	1,552	1,472	1,622	1,464	1,748	1,926
Textiles, fabrics, etc.. . . . .	950	975	1,084	951	1,171	1,154
Metals and metal manufactures . . . . .	864	1,026	1,244	1,032	969	1,134
Machinery and transport equipment . . . . .	5,572	7,042	8,119	7,028	7,243	9,068
Other imports. . . . .	3,234	3,445	3,937	3,743	4,371	5,172
<b>Total imports of goods f.o.b. . . . .</b>	<b>15,831</b>	<b>17,600</b>	<b>19,787</b>	<b>17,738</b>	<b>18,774</b>	<b>21,893</b>

## FOREIGN PARTICIPATION STATISTICS

Foreign participation statistics include statistics on both foreign ownership and control of enterprises in Australia. Foreign ownership statistics provide a measure of the beneficial equity interest held by foreign residents (individuals and companies) in enterprises in Australia. Foreign control statistics provide a measure of the potential control, through ownership of voting shares, that foreign residents may have over the key policy decisions of enterprises in Australia. Following the termination of a previous program of studies in 1978 a program of foreign participation studies of industries and economic activities was re-introduced in 1982.

Brief explanatory notes and separate summary tables of ownership and control statistics are presented in the following tables for the most recent studies of mining, manufacturing, new fixed capital expenditure (control only), life insurance, general insurance, registered financial corporations and agriculture.

For agriculture, separate measures are provided for ownership of agricultural land and for ownership and control of agricultural activity. The statistics presented on foreign ownership of agricultural land are based on the ownership characteristics of the landowners. The statistics on foreign ownership and control of agricultural activity, on the other hand, are based on the ownership characteristics of the businesses operating on agricultural land. The owners of any particular parcel of land and the business operating on that land can, of course, be different entities.

### Scope and methodology

The scope of each study together with the methodology used is outlined in the individual foreign participation publications listed in the bibliography at the end of this chapter. The statistical unit used in the compilation of the statistics is also defined in each publication. Generally, foreign participation characteristics for statistical units in each study were derived from information on ownership links collected from enterprises included in the biennial ABS Survey of Shareholdings.

### Measurement of Ownership and Control

*Foreign ownership* is measured in terms of the beneficial equity interest (through ownership links) of all identified foreign residents:

- (i) in enterprises operating in Australia, or
- (ii) in agricultural land.

In order to calculate the beneficial equity interests of foreign residents whose interests are held through other enterprises in Australia, all relevant ownership links are multiplied together. *Australian ownership* is all ownership not identified as foreign ownership.

To measure the aggregate levels of foreign and Australian ownership in a particular industry, the amount reported for the selected data item (value added, premiums received, assets, gross value of agricultural commodities produced or area of agricultural land) for each statistical unit is apportioned between foreign and Australian ownership in proportion to the percentages of foreign and Australian ownership in that unit. Data for each unit are then aggregated to obtain totals of foreign and Australian ownership.

In *control statistics*, enterprises are classified to one of four categories of control: foreign control; joint foreign and Australian control; naturalised or naturalising; and Australian control.

An enterprise is classified to *foreign control* if it has not been granted naturalised or naturalising status under the government's foreign investment policy and if a foreign investor (individual, company or group of related companies) or a foreign controlled enterprise holds at least 25 per cent of its voting shares and there are no equal or larger shareholdings by an Australian resident, an Australian controlled enterprise or a joint foreign and Australian controlled enterprise.

An enterprise is classified to *joint foreign and Australian control* if it does not have naturalised or naturalising status and either the single largest shareholder has 25 per cent or more of the voting shares and is itself joint foreign and Australian controlled or there are two or more equally large investors (there being no single larger investor) each with 25 per cent or more of the voting shares in the enterprise and:

- (i) at least one of these investors is either a foreign resident or foreign controlled enterprise and at least one of these investors is either an Australian resident individual or an Australian controlled enterprise; or
- (ii) at least one of these investors is joint foreign and Australian controlled.

An enterprise is classified to *naturalised or naturalising* if it had such status (on 31 March 1984 for agriculture or on 30 June 1983 for the other studies covered by the following control summary table) under the government's foreign investment policy and would otherwise be classified to either foreign control or joint foreign and Australian control.

All enterprises not classified as foreign controlled, joint foreign and Australian controlled, or naturalised or naturalising are classified to *Australian control*.

To measure the levels of control in an industry (or economic activity) for each of these four categories of control, the whole of the amount reported for the selected data item (value added, new fixed capital expenditure, premiums received, assets or gross value of agricultural commodities produced) for each statistical unit is allocated to the control category of that unit. Data for each unit are then aggregated to obtain totals for the industry (economic activity) attributable to each of the four control categories.

#### **Country of Ownership and Control**

In the following tables the classifications by country of foreign ownership or control are based on the country of domicile of the immediate foreign investor which may not be the country of domicile of the ultimate foreign investor.

OWNERSHIP SUMMARY BY COUNTRY OF OWNERSHIP

Industry/activity	Reference period	Ownership measured in terms of:	Total value of measure used	Foreign ownership					Australian ownership	Total
				USA	UK	Other EEC (a)	Other	Total		
			\$ million							
						— per cent —				
Mining industry	1982-83	value added	8,146.6	24.0	16.1	2.2	8.0	50.4	49.6	100.0
Manufacturing industry	1982-83	value added	31,059.1	12.2	12.7	1.8	6.2	32.9	67.1	100.0
Life insurance industry	1983-84	premiums received	3,306.8	2.7	20.6	3.2	13.8	40.3	59.7	100.0
General insurance industry	1983-84	premiums receivable	5,934.8	2.5	17.0	4.9	9.8	34.1	65.9	100.0
Registered financial corporations	1983-84	assets	75,058.5	12.2	13.4	10.3		35.9	64.1	100.0
Agriculture—										
Agricultural activity	1983-84	gross value of agricultural commodities produced	15,317.2	0.5	0.7	0.5		1.8	98.2	100.0
			million hectares							
Agricultural land	at 31 March 1984	agricultural land area	486.6	1.8	2.4	0.2	1.4	5.9	94.1	100.0

(a) Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands.

FOREIGN PARTICIPATION

## CONTROL SUMMARY BY COUNTRY OF CONTROL

Industry/activity	Reference period	Control measured in terms of:	Total value of measure used	Foreign control					Joint foreign and Australian Control	Naturalised and Naturalising	Australian Control	Total
				USA	UK	Other EEC (a)	Other	Total				
			\$ million						— per cent —			
Mining industry	1982-83	value added	8,146.6	13.7	12.0	1.9		27.6	19.9	9.1	43.4	100.0
Manufacturing industry	1982-83	value added	31,059.1	12.4	12.9	1.9	4.9	32.1	1.2	1.3	65.4	100.0
New fixed capital expenditure by private enterprises—												
Selected industries	1982-83	new fixed capital expenditure	15,805.6	15.6	10.5	1.1	2.7	29.9	7.1	2.0	61.0	100.0
Life insurance industry												
General insurance industry	1983-84	premiums received	3,306.8	2.9	15.7	4.6	3.4	26.6	n.a.(b)	..	73.4	100.0
Registered financial corporations	1983-84	premiums receivable	5,934.8	2.4	15.6	5.7	9.0	32.6	3.3	..	64.1	100.0
Agricultural activity	1983-84	assets	75,058.5	10.5	10.4	5.8		26.8	4.6	..	68.6	100.0
	1983-84	gross value of agricultural commodities produced	15,317.2	0.5	0.5	0.5		1.5	0.2		98.2	100.0

(a) Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands.

(b) Only one enterprise in this category was identified. It has been included in the statistics for the foreign control category.

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 Balance of Payments, Australia (5303.0)  
 Foreign Investment, Australia (preliminary) (5304.0)  
 Foreign Investment, Australia (5305.0)  
 Foreign Investment in Enterprises in Australia (quarterly) (5306.0)  
 Foreign Investment in Enterprises in Australia (preliminary) (quarterly) (5307.0)  
 Foreign Ownership and Control of the Life Insurance Industry, Australia (5309.0)  
 Foreign Ownership and Control of the General Insurance Industry, Australia (5311.0)  
 Foreign Ownership and Control of the Mining Industry, Australia (5317.0)  
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 Balance of Payments, Australia: Concepts, Sources and Methods (5331.0)  
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 Foreign Control of New Fixed Capital Expenditure by Private Enterprises in Selected Industries, Australia (5333.0)  
 Foreign Ownership and Control of Registered Financial Corporations, Australia (5334.0)  
 Foreign Ownership and Control in Agriculture, Australia (5336.0)  
 Exports by Commodity Divisions, Australia (monthly) (5402.0)  
 Exports of Major Commodities and Their Principal Markets, Australia (monthly) (5403.0)  
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 Imports by Commodity Divisions, Australia (preliminary) (monthly) (5405.0)  
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 Australian Imports, Country by Commodity (5414.0): microfiche edition (5431.0)  
 Imports of Assembled New Passenger Motor Cars, Australia (monthly) (5416.0)—final issue June 1985  
 Exports and Imports, Australia: Trade with Selected Countries and Major Country Groups (quarterly) (5422.0)  
 Exports of Major Commodities and Their Principal Markets, Australia (5423.0)  
 Exports, Australia: Annual Summary Tables (5424.0)  
 Customs and Excise Revenue, Australia (monthly) (5425.0)  
 Imports, Australia: Annual Summary Tables (5426.0)  
 Customs and Excise Revenue, Australia: Annual Summary Tables (5427.0)

**Other Publications****Department of Industry and Commerce**

- Australian Customs Tariff  
 Customs (Prohibited Imports) Regulations

**Other information available**

*Special returns service:* Subscribers to this service can receive computer produced printout of foreign trade statistics at a particular commodity level in one or more of a limited number of formats, for a charge consistent with the level of detail required. This service is recommended where up to fifty specific commodity items are required on a regular basis.

*Microfiche service:* Foreign trade statistics are also available on microfiche in a variety of tabular formats. Each tabular format covers all commodities exported or imported, at various levels of aggregation. This service is recommended where the subscriber wishes to obtain foreign trade details for a large number of commodities.



*Magnetic tape:* Statistics for imports, exports and import clearances are available on 9-track magnetic tape approximately 4 weeks after the end of the reference period. This service is recommended where the subscriber wishes to obtain trade data at the most detailed level. Documentation regarding the content and structure of these tapes is available from the ABS Trade and Shipping Section in Canberra.

To meet subscribers' needs special returns and microfiche are available on a monthly, quarterly or less frequent basis. Relevant application forms and information papers for these services are available from the ABS Trade and Shipping Section in Canberra or any ABS State office. Payment in advance is required for each of these services.

## CHAPTER 25

### SCIENCE AND TECHNOLOGY

Science and technology directly influence the strength and competitiveness of industry by providing a basis for technological change and thereby encouraging economic growth and development. They can be seen as making major contributions to the achievement of many of Australia's social, economic and industrial goals.

The Government's conviction of the importance of science and technology is reflected in the roles and functions of the Department of Science and the Department of Industry, Technology and Commerce. Apart from having general responsibility for science and technology, these departments are concerned with the development and maintenance of Australia's scientific and technological capability.

#### The Department of Science

##### Scope and Policy

The portfolio of the Minister for Science covers the Department of Science (with an approved staff level of about 3,000), the Commonwealth Scientific and Industrial Research Organization (CSIRO), the National Standards Commission, the Australian Institute of Marine Science and the Anglo-Australian Telescope Board. The Department maintains close links with all four organisations.

The Department of Science was established in December 1984, with a brief to develop science policy and services. It advises the Minister on a range of policy issues, proposals and submissions from interested parties and also presents submissions to Parliamentary and other inquiries of relevance to the Department's role and responsibilities. It has regular contact with other Commonwealth and State government departments and statutory authorities in order to assist integration of science policies with industry, economic and social policies.

The Department helps to stimulate science in Australia and advises the Government on policies relevant to the needs of research institutions and industry. The current programs can be grouped under the following objectives:

- to stimulate scientific research in industry, government and academic sectors;
- to promote Australia's interests through international co-operation in science;
- to ensure that science issues are considered in the development of government policies;
- to improve community awareness of the advantages and disadvantages of science;
- to develop Australia's role in space activities;
- to carry out Australian Government policy as it relates to Antarctica (see entry on Antarctic Division, p 651);
- to provide the national meteorological service (see entry on Meteorology, p 640);
- to provide the national ionospheric prediction service (see entry on Ionospheric Prediction Service, p 640);
- to provide a Government analytical service (see entry on Australian Government Analytical Laboratories, p 639);
- to provide a national industrial property service to Australia, and development assistance in industrial property services to developing countries under international arrangements.

##### Financial Support for Research

The Department administers several funding schemes to stimulate research and development. The major ones are the Australian Research Grants Scheme (ARGS) and the Marine Sciences and Technologies Research Grants Scheme.

The ARGS provides support for basic research in a range of subjects at universities and other non-government institutions. ARGS grants for 1985 totalled \$23.9m. In addition, under the Queen Elizabeth II Fellowships Scheme, up to fifty post-doctoral fellowships are awarded each year to young scientists to carry out full-time research in the physical or biological sciences at institutions in Australia.

The Marine Sciences and Technologies Grants Scheme assists universities and other organisations with projects involving, for example, the Great Barrier Reef, Bass Strait and the North West Shelf; Queen's Fellowships in Marine Science provide post-graduate research opportunities at Australian institutions. Through the portfolio of the Minister for Science, a total of about \$31m was provided for marine research in 1984-85, recipients of funds included the CSIRO, the Australian Institute of Marine Science, the Department's Antarctic Division and individual research workers.

In 1983, the Government established the National Research Fellowships Scheme which supports research in priority areas of national interest, industry-based research and fundamental research (estimated expenditure is \$2.1m in 1984-85).

#### **Science Information and Education**

The Minister for Science announced the formation of the Commission for the Future during 1985. This will assist public discussion and awareness of science and technology issues, particularly where they affect the community. The Commission will report to the Minister for Science but will also be expected to undertake wide-ranging publicity activities with maximum involvement of all sections of the general public.

The Minister for Science announced in 1984 that the Government had agreed to commence negotiations with potential sponsors for the establishment of a National Science Centre as a Bicentennial project. The Centre would have its headquarters in Canberra but would reach out to the whole community through touring exhibitions and provision of the exhibits to other institutions throughout Australia in 1988 and beyond. The Centre, which will be funded by the Australian Bicentennial Authority and other sponsors, will be part of the National Program of projects and events to celebrate the Bicentenary in 1988.

### **The Department of Industry, Technology and Commerce**

The Department of Industry, Technology and Commerce is responsible for advising the Government and implementing its policies in relation to Australian manufacturing and service industries and technology. The Department provides the framework for a stronger national and technological capability and greater efficiency from research and development, production, marketing and distribution.

The Department acquired the technology function in December 1984. Technological innovation is recognised as one of the most important generators of economic growth and structural change in modern economies.

Recently, most Australian R&D has been funded and performed in the public sector. It is a priority of the Government to encourage the establishment of more effective links between public sector R&D institutions and the private sector in order to increase the likelihood of R&D being translated into commercial products and processes. In line with this goal, a tax incentive has been instituted to encourage the private sector to carry out more R&D. Expenditure on R&D by incorporated companies will attract a 150 per cent taxation deduction for amounts over \$50,000 per annum. There is a phased scale for deductibility of amounts less than \$50,000 but more than \$20,000. The taxation concession scheme commenced on 1 July 1985 and will operate initially for six years.

#### **Technology Development and Financial Support for Research**

The Department develops and applies various programs to encourage manufacturing industry to become more competitive and export oriented. One such program is the Manufacturing Technology Development Program which fosters the development and promotion of innovative manufacturing technologies. Projects being undertaken within this program include the development of robots, photovoltaic cells and computer-aided manufacturing techniques.

Departmental activities encourage the innovative use of technology; in the field of biotechnology, for instance, the Department seeks to promote close co-operation among researchers, financiers and others interested in the commercial development of genetically engineered organisms.

An important Departmental function is the promotion of an entrepreneurial attitude to the commercialisation of new products and processes. In 1984, the Government established the Management and Investment Companies Licensing Board (the Office of the Board is part of the Department) to encourage the development of a venture capital market in Australia.

Licensed management and investment companies have to invest in young high-growth companies operating mainly in defined industries; the investment involves a taxation incentive. With the Department's assistance, Innovation Centres have been established in New South Wales, Victoria, Western Australia and South Australia. The centres promote interaction between inventors and manufacturers, and give inventors access to the information, expertise, services and facilities needed to carry inventions from the initial stage of technical and economic evaluation to the market place. Similar centres are being planned in Queensland and Tasmania. As well, the Department administers the Assistance to Inventors' Scheme which supports individuals with grants and advice to develop inventions.

The Department is responsible for a number of programs aimed at transferring technology from innovative sources to manufacturers. These programs are concerned with information technology awareness, manufacturing technology transfer and the formation and support of research associations.

Under the *Industrial Research and Development Incentives Act 1976*, three forms of assistance administered by the Department are available to industry: commencement grants, project grants and public interest funding. Commencement grants, each available for up to five years and with an annual limit of \$40,000, encourage the growth of industrial R & D capability in mainly small and medium-size companies. Project grants with an annual limit of \$750,000 per company, assist companies with an established R & D capability to undertake specific and significant R & D projects. Public interest funding involves the placement of contracts by the Commonwealth for work on industrial research projects with the potential to benefit Australia. Projects in progress cover water treatment, food processing, agricultural technology, biomedical engineering, processing technologies of metals, and the use of computers and micro-electronics in heavy engineering and information applications. Total funds provided for AIRDIS grants and projects in 1985-86 are \$65.4m.

### Industry Services

Industry Services consists of the provision and oversighting of a range of extension services to industry and covers the activities of:

- the multiplier agencies such as Technology Transfer Council, Australian Productivity Council and the Industrial Design Council of Australia;
- the service agencies comprising the Standards Association of Australia and the National Association of Testing Authorities; and
- the eight industry research associations covering particleboard, timber, welding, bread, brick development, medical engineering, radiata pine and sugar.

Activities of these bodies range widely, covering technology transfer; promoting improved design, quality, product development productivity and management practices in firms; support for industry research and development projects; the development of standards; and testing and accreditation of laboratories. In 1985-86, Commonwealth grants totalling \$8.8m will be made available to these bodies, including \$2.9m to the multiplier agencies, \$3.9m to the service bodies and \$2.0m to industry research associations.

## Advice and Co-ordination

### National Advisory Bodies

Australia has several agencies with policy and funding responsibilities for various aspects of science and technology. In order to achieve integration of advice, relative assessment of priorities and the development of broad strategies for future directions, several national advisory bodies, in addition to government departments such as the Department of Science, the Department of Industry, Technology and Commerce and the Department of Resources and Energy, have been established; the major ones are:

- The Australian Science and Technology Council;
- The National Energy Research, Development and Demonstration Council (See Chapter 18, Energy);
- The Australian Manufacturing Council.

*Australian Science and Technology Council (ASTEC)*: ASTEC was established as a statutory authority in February 1979 under the *Australian Science and Technology Council Act 1978*. The Council reports to the Prime Minister and is the Government's principal source of independent advice on science and technology matters. As part of this role, it maintains an overview of the science and technology activities of Commonwealth Government departments and agencies, universities and private enterprise.

The functions of the Council are to investigate, and to advise the Commonwealth Government on matters relating to science and technology, such as:

- the advancement of scientific knowledge;
- the development and application of science and technology in relation to promotion of the national well-being;
- the adequacy, effectiveness and overall balance of scientific and technological activities in Australia;
- the identification and support of new ideas in science and technology likely to be of national importance;
- the practical development and application of scientific discoveries;
- the fostering of scientific and technological innovation in industry; and
- the means of improving efficiency in the use of resources by the application of science and technology.

*Australian Manufacturing Council (AMC)*: The AMC was established in 1977. New arrangements, enlarging the role of the Council were instituted by the incoming Government in 1983. The Council advises the Minister for Industry, Technology and Commerce on matters of concern to the manufacturing sector and acts as a forum for discussion and consultation on such matters. In conjunction with the AMC there are eleven Industry Councils covering all major areas of the manufacturing industry.

Other official advisory bodies have been established to deal with activities, interests and responsibilities of the Commonwealth Government and its agencies, and to advise on Government support of higher education and of industry. Amongst these bodies are the National Health and Medical Research Council; the CSIRO Advisory Council and its State Committees; the Rural Industry Research Fund Advisory Committees and the Commonwealth Tertiary Education Commission.

### **Other Organisations**

Advice to government on scientific and technology issues comes also from various learned and professional bodies. Advice may be offered on the initiative of the organisation itself or in response to an official request. For example, the Australian Academy of Science maintains a number of national and standing committees which specialise in selected broad fields of science; ad hoc advisory committees are appointed by the Academy to examine and report on specific matters.

Since 1967 the Academy has maintained a Science and Industry Forum which brings together leading scientists and industrialists to discuss topics of national significance; a complementary Science and Society Forum was inaugurated in 1973. Communication between government and the technology area of the science-technology spectrum is facilitated by the Australian Academy of Technological Sciences.

The most broadly based of the learned and professional bodies is the Australian and New Zealand Association for the Advancement of Science (ANZAAS) which is concerned with all fields of the natural and social sciences. It encourages interdisciplinary communication and information dissemination through national conferences, State programs and the bi-monthly magazine, *Search*.

There are a number of groups within the industry sector—e.g. the Australian Industrial Research Group (AIRG) and the Industry Councils which, from time to time, provide advice to government on specific matters.

Intergovernmental co-ordination is effected through Ministerial councils established for the purpose. While some of these councils are concerned with promoting research and scientific and technical services, they do not directly undertake research or provide services. Typical of these bodies are the Australian Agricultural Council, the Australian Minerals and Energy Council, the Australian Water Resources Council, and the Australian Environment Council. In some instances, councils have control of research funds and provide grants or arrange for projects to be undertaken in particular fields of interest.

In some scientific and technical fields not coming directly within the scope of the Ministerial councils, there are standing arrangements at agency level for consultation and co-operation (the Electricity Supply Association of Australia is an example).

The Building Research and Development Advisory Committee advises the Australian Government and its building research organisations (CSIRO Division of Building Research and the Experimental Building Station of the Department of Housing and Construction) on the research needs and priorities of the housing and construction industry. The Committee also advises the Minister for Housing and Construction on issues of research policy relating to all sectors of the industry.

The Australian Water Resources Council (AWRC) was established in 1963 and is a Commonwealth and State Ministers' forum for dealing with water resources matters. Commonwealth and State collaboration through the AWRC initially concentrated on resources assessment and research, but more recently the Council's functions have been expanded to include management and planning. The AWRC and its committees have provided an important contribution to the development of Commonwealth water policies and programs and, in many cases, provide the means of implementing them.

The Department of Resources and Energy administers a water research program through the Australian Water Resources Advisory Council (AWRAC). AWRAC advises the Minister on water resources priorities and goals and makes recommendations on effective research. The water research program is funded by the Water Research Fund at a cost of about \$600,000 a year; it covers basic and applied research into all aspects of water resources.

## **Resources and Services**

Although power to regulate the development and utilisation of Australia's natural resources rests largely with the States, the Commonwealth Government, in part because of its jurisdiction in the control of Australia's overseas trade, also plays an important role. Extensive machinery exists for consultation and collaboration between the Commonwealth and State governments in relation to the development and management of natural resources.

Several important resources and services are dealt with elsewhere in this Year Book and are thus not included in this chapter. These include Health (Chapter 10), Agricultural Industries (Chapter 13), Forestry and Fisheries (Chapter 14), Water Resources (Chapter 15), Mineral Industry (Chapter 16), Transport and Communications (Chapter 20) and Culture, Heritage and Environment, Tourism (Chapter 26).

### **Soil Resources**

A Standing Committee on Soil Conservation was established in 1946. It comprises the heads of soil conservation bodies in the States and representatives of the Department of Primary Industry and the CSIRO. The Committee advises the Australian Agricultural Council on matters relating to soil conservation.

### **Australian Government Analytical Laboratories (AGAL)**

AGAL, part of the Department of Science, provides valuable chemical and microbiological research and services to assist the Commonwealth Government in protecting public health, collecting import duties, enforcing laws against importing illicit drugs and certifying the quality of exports.

With laboratories in Sydney, Melbourne, Perth, Adelaide and Hobart, AGAL conducts more than 160,000 tests a year, mainly for Commonwealth bodies such as the Department of Primary Industry (primary produce), the Australian Customs Service (goods for tariff classification, trade description, spirits, unsafe goods, fertilisers and illicit drugs) and the Department of Health (pharmaceuticals, food, narcotics, sunscreen preparations and cigarettes).

In recent years AGAL has undertaken species testing of meat; detected substitution of barramundi with cheaper fish, and adulteration of honey and spirits; examined salami sausages in connection with a food-poisoning outbreak in Victoria; and analysed imported wound dressings and locally produced powdered infant foods for bacterial contamination.

The laboratories' chemists work closely with the Australian Federal Police in analysing suspected illicit substances and drugs, and providing expert testimony in court cases. AGAL also co-operates with CSIRO, Commonwealth Serum Laboratories, National Biological Standards Laboratory, Standards Association of Australia, National Association of Testing Authorities and a number of international bodies.

### **The Patent, Trade Marks and Design Office**

This Office is part of the Department of Science. It administers systems for the protection of inventions, the registration of trade marks and industrial designs and provides a patent information service. The Office contributes advice and expertise to other areas of the Department and to government agencies involved in encouraging inventions and technological innovation. It also represents Australia's interests in the World Intellectual Property Organization (a United Nations agency) and a number of important international treaties concerned with industrial property, notably the Patent Co-operation Treaty (PCT).

In Canberra, the Office maintains the largest technology library in the Southern Hemisphere, with some 22 million patent documents from about forty countries. Access is provided to interested persons and a selected coverage is available through the State branches.

Each year the Office examines about 8,500 patent applications, 11,000 applications for registration of trade marks and 3,300 applications for registration of industrial designs. It also issues about 250 international search reports a year for international applications under the PCT. With further computerisation of information management systems, these levels are expected to increase.

The office assists industry to extract technological information from the major industrialised nations' patent specifications. Special reports are published on patent trends and developments. Australian Patent Information Service (APIS) officers, based in Canberra, Sydney and Melbourne, further assist industry by conducting technology searches, by providing information on the activities in specialist fields and by providing general overviews of particular technology areas.

### **Meteorology**

The Bureau of Meteorology, part of the Department of Science, operates under the *Meteorology Act 1955*. As Australia's national meteorological authority, its basic mission is to explore Australia's weather and climate and to apply the knowledge gained to the provision of meteorological services to meet Australia's national needs and international obligations.

The Bureau has an operational staff of about 1,700 personnel employed throughout Australia and its Territories (including Antarctica). It has a Head Office in Melbourne, Regional Forecasting Centres in each capital city, Canberra and Darwin, 28 Weather Service Offices at major airports and RAAF bases, and 63 observing offices at other centres.

Users of Bureau services include the general public, defence forces, civil aviation and marine authorities, and specialist groups in primary and secondary industries. Apart from forecasting services, the Bureau satisfies many requests for data from the National Climatological Data Bank.

Programs of research are carried out in support of these services, often in co-operation with other institutions concerned with atmospheric science, including universities and the CSIRO. Major research topics include numerical modelling techniques for predicting atmospheric behaviour; better use of data derived from satellites; tropical cyclones and cold fronts.

### **Ionospheric Prediction Services (IPS)**

The Ionospheric Prediction Service Branch of the Department of Science assists users of radio communications to achieve the most effective and efficient use of radio communication which is influenced by or dependent on the ionosphere. The Branch operates ionospheric and solar observatories in Australia and Papua New Guinea, and produces radio propagation predictions and warnings of ionospheric, solar and magnetic disturbances. The IPS also conducts research into physical phenomena affecting the ionosphere and into radio wave propagation.

### **National Materials Handling Bureau**

The National Materials Handling Bureau of the Department of Industry, Technology and Commerce carries out research, development and promotion relating to the application of improved materials handling, including the equipment, systems, standards, methods, management and control aspects involved in the supply, production, movement, packaging, storage and distribution of goods and materials.

### **Satellite Remote Sensing**

In 1978 the Commonwealth Government decided to establish facilities for receiving and processing information from the US National Aeronautics and Space Administration's series of Landsat satellites. The Department of Resources and Energy operates the facilities. A data-acquisition station is located at Alice Springs, with a data-processing facility in Canberra. Additional information on Landsat stations is provided in Year Book No. 64, pp. 722-724.

### **Scientific and Technological Information Services**

Scientific literature and technical information for scientists and technologists is provided through library and information services provided by the Commonwealth of Australia, State Government instrumentalities, tertiary institutions and industrial organisations. The more

important scientific libraries and information services within the Commonwealth sector are the National Library of Australia, the CSIRO Library network and information services, and the libraries and information services maintained by the Department of Health and the Australian Atomic Energy Commission.

Several Commonwealth agencies, including the Australian Atomic Energy Commission, the Australian Road Research Board and the National Library of Australia, are now offering Australian users access to bibliographic data bases via a commercial computer services bureau (AUSINET). The Australian Mineral Foundation provides an earth-resource data base, also through AUSINET. The National Library of Australia and the Department of Health operate a national health information network, the Australian Medline Network. The CSIRO provides access to data bases on CSIRONET. The Overseas Telecommunications Commission (Australia) operates an international packet switched data transfer service known as MIDAS (Multi-mode International Data Acquisition Service) which is a cost-effective means of accessing international computing facilities and host computers in the Asian, American and European regions.

Another overseas trend in which Australian scientists are showing interest is the development of numerical data bases which provide quick access to factual data. The CSIRO is currently operating Thermodata, a metallurgical thermodynamic data base and other similar data bases in crystallography and mass spectra data. Similar numeric and factual data bases are at present being evaluated by other Commonwealth agencies.

A number of Australian scientific and technological indexes and directories now exist or are in the course of production by Commonwealth Government departments and agencies. Examples are:

- a computer-based register of Australian energy research, development and demonstration projects containing an outline of the objectives, methodology and status of each project. The register is maintained by the CSIRO on behalf of the Department of Resources and Energy and contains references to about 1,000 projects. It is used to generate annual updates of the Compendium of Australian Energy Research Development and Demonstration Projects;
- a national directory of current Australian marine research. The Directory of Australian Marine Research in Progress is a joint publication by the Australian Institute of Marine Science, the Great Barrier Reef Marine Park Authority, the CSIRO and the Victorian Institute of Marine Sciences. The Directory identifies individuals and organisations undertaking marine research and provides details of their objectives, methodology, publications, current status and funding;
- a computerised bibliographic data base, STREAMLINE, providing references to published and unpublished documents and current research projects on all facets of water and wastewater in Australia, has been established by the Department of Resources and Energy in association with State water agencies. The data base is publicly available on AUSINET, and a regular current awareness bulletin and a directory of research projects are produced.

#### **Units and Standards of Physical Measurement**

The maintenance of Australia's standards of measurement is included in the *Science and Industry Research Act, 1949* as one of the functions of the CSIRO. Furthermore the *Weights and Measures (National Standards) Act, 1960* requires CSIRO to maintain, or cause to be maintained, standards of all physical quantities for which there are legal units of measurement. This statutory responsibility has devolved upon the Division of Applied Physics which has its headquarters in the National Measurement Laboratory in the Sydney suburb of Lindfield, and branch laboratories in Adelaide and Melbourne. CSIRO has authorised the Australian Atomic Energy Commission and the Australian Radiation Laboratory to maintain the Australian standards for quantities relating to ionising radiations such as radioactivity, exposure and absorbed dose. It has also authorised the Division of National Mapping (Department of Resources and Energy) and Telecom Australia to maintain working standards of time interval and frequency.

The National Standards Commission is responsible for determining the legal units and standards of physical measurement, co-ordinating the national measurement system and approving measuring instruments for use in trade.

In September 1984 the *Weights and Measures (National Standards) Act* was amended and the title changed to the *National Measurement Act*. The amendments clarified the functions of the Commission and transferred to it the responsibility for continuing the



introduction of the metric system of measurement into Australia. This was previously a function of the Metric Conversion Board.

A review of the trade measurement system is being undertaken by a consultant (funded jointly by the Commonwealth and the States) to identify community and industry needs to determine the most effective method of meeting those needs.

#### **National Information Technology Council (NITC)**

The NITC was established in 1984 to continue and expand upon the work of the National Information Technology Week Committee which was created in 1979.

Recognising that the major problems relating to the transfer, ownership, adoption and employment effects of technology are not technological but social, political and cultural, the NITC has developed mechanisms to raise the level of industry and community understanding and appreciation of information technology.

The NITC is funded by the Department of Industry, Technology and Commerce and the Australian Computer Society. The work is administered through State committees which receive additional funding from State governments.

### **Research and Development**

Much of the early history of Australian science was based largely on the individual achievements of a few outstanding scientists.

During and after World War I, governments in various parts of the world took initiatives aimed at encouraging scientific research and applying it to economic growth and national development; Australia was no exception. In 1926 the Council for Scientific and Industrial Research (CSIR) was established by the Commonwealth Government. Initially, it concentrated its efforts on the primary industries, typifying the trend of research in Australia at the time, when most major research initiatives were taken by Government and aimed at the primary industries.

With the approach of World War II, however, moves were made to extend scientific support for secondary industry. In the CSIR, Divisions created in the period 1937-40 were to play an important part in the rapid development of Australian industry which occurred under the stimulus of war-time needs.

Expansion of scientific research in general, and industrial research in particular, continued after the war. This expansion extended beyond government into the universities and industry.

Though even today agricultural research absorbs a significant proportion of Australia's research effort, industrial, medical and defence research are now of major importance also. The volume of research in the social sciences and humanities remains small, although in Australia, as elsewhere in recent years, there has been increasing support for the view that adequate weight must be given in governmental policy-making to the social aspects of national proposals.

For details of expenditure and human resources devoted to research, see section below.

#### **Expenditure and Human Resources Devoted to Research and Experimental Development**

Project SCORE (Survey and Comparisons of Research Expenditures) which provided details of Australian expenditure on research and experimental development activities was reviewed in 1984. As a result of this exercise the previously separate Project SCORE and Energy Research and Experimental Development Surveys were amalgamated into a single biennial survey known as the *Survey of Research and Experimental Development*. The latest survey was conducted in respect of 1984-85; complete results are not yet available. To satisfy a need for constantly updated statistics, an Inter Year Estimates survey will be conducted on a much smaller scale in each of the intervening years. The first such survey covering only the business enterprise sector was conducted in respect of 1983-84. This survey may be extended to the remaining sectors in 1985-86 and subsequent cycles. While the Survey of Research and Experimental Development provides comprehensive data on research and experimental development activities, it does not cover all resources devoted to scientific and technological activities in Australia. Activities not covered by the survey include scientific or technological services, extension services, education and training, etc.

The first comprehensive survey on research and experimental development (R & D) was carried out for the financial year 1968-69. There have been five subsequent surveys, the latest for which comprehensive results are available being in respect of 1981-82 (1981 calendar year for the Higher Education Sector).

The estimate of gross expenditure on R & D (GERD) carried out in Australia, as derived from the results of the 1981-82 survey, is \$1,522m. This represents a 44 per cent increase compared with the 1978-79 Survey. At constant (1979-80) prices, GERD increased by 4 per cent over the same period. The total estimate of human resources devoted to R & D during 1981-82 in Australia is 44,535 man-years; this compares with 43,643 man-years for the previous survey.

*Survey Methods and Concepts.* The Survey of Research and Experimental Development measures R & D expenditure and human resources in the natural and social sciences in the major sectors of the Australian economy. For the purposes of the survey, four sectors are recognised: Business Enterprises (public and private business enterprises, excluding those mainly engaged in agriculture, forestry, fishing and hunting); General Government (all State and Commonwealth Government organisations but excluding local government organisations); Higher Education (universities and colleges of advanced education), and Private Non-profit (private or semi-public organisations which are not established with the aim of making a profit). The surveys are conducted by means of mailed questionnaires and, in order to provide direct comparisons with other OECD countries, follow guidelines described by the OECD for national R & D surveys. The OECD defines R & D as comprising "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications".

For further details concerning survey methods and concepts see the ABS bulletins mentioned below.

*Survey Results.* A summary of results for 1968-69 is given in Year Book No. 60. Results for the second survey, 1973-74 (1974 calendar year for the Higher Education Sector); the third survey, 1976-77 (1976 calendar year for the Higher Education Sector); and the fourth survey, 1978-79 (1978 calendar year for the Higher Education Sector) are given in Year Books No. 61, 64 and 67 respectively.

Detailed results for the fifth survey, 1981-82 (1981 calendar year for the Higher Education Sector) are contained in the ABS publications: *Research and Experimental Development, Business Enterprises, Australia, 1981-82* (8104.0); *Research and Experimental Development, General Government Organisations, Australia, 1981-82* (8109.0); *Research and Experimental Development, Higher Education Organisations, Australia, 1981* (8111.0); *Research and Experimental Development, All Sector Summary, Australia 1981-82* (8112.0). Results for the Private Non-profit Sector were included in catalogue 8112.0. Results of the Inter Year Survey, 1983-84 are contained in the ABS publication: *Research and Experimental Development, Business Enterprises (Inter Year Survey), Australia, 1983-84* (8114.0). Some preliminary results for the sixth survey are available and can be found in the ABS publications: *Research and Experimental Development, Business Enterprises, Australia, 1984-85, Preliminary* (8105.0); *Research and Experimental Development, General Government and Private Non-profit Organisations, Australia, 1984-85, Preliminary* (8108.0) and *Research and Experimental Development, Higher Education Organisations, Australia, 1984, Preliminary* (8115.0).

A summary of results from the fifth survey is presented below. Some data are also presented from the 1983-84 Inter Year Survey of the Business Enterprise sector.

**Business Enterprise Sector.** The estimate of expenditure on R & D carried out in Australia by private and public business enterprises during 1981-82 is \$341m at *current* prices. This represents a 39 per cent increase in expenditure compared with 1978-79. At *constant* (average 1979-80) prices, R & D expenditure is estimated to have decreased by 1 per cent over the same period.

The estimate of manpower effort devoted to R & D carried out by business enterprises during 1981-82 is 7,923 man-years. This represents a decrease of 8 per cent compared with 1978-79.

A summary of Business Enterprise R & D data for 1981-82 is shown in the tables below.

The estimate of expenditure on R & D carried out in Australia by private and public business enterprises during 1983-84 is \$415m at *current* prices. This represents a 22 per cent increase in expenditure compared with 1981-82. At *constant* prices, R & D expenditure is estimated to have increased by 2 per cent between those years.

The estimate of manpower effort devoted to R & D carried out by business enterprises during 1983-84 is 7,558 man-years. This represents a decrease of 5 per cent compared with 1981-82.

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY BUSINESS ENTERPRISES,  
EXPENDITURE AT CURRENT AND CONSTANT PRICES**  
(\$m)

	1976-77	1978-79	1981-82	1983-84(a)
<b>AT CURRENT PRICES</b>				
Private enterprises . . . . .	160.4	205.8	285.7	n.a.
Public sector business enterprises . . . . .	42.4	40.0	54.8	n.a.
<b>Total business enterprises . . . . .</b>	<b>202.8</b>	<b>245.8</b>	<b>340.5</b>	<b>(b)414.5</b>
<b>AT CONSTANT (AVERAGE 1979-80) PRICES</b>				
Private enterprises . . . . .	n.a.	n.a.	n.a.	n.a.
Public sector business enterprises . . . . .	n.a.	n.a.	n.a.	n.a.
<b>Total business enterprises . . . . .</b>	<b>r269.7</b>	<b>r269.1</b>	<b>r265.4</b>	<b>(c)271.0</b>

(a) Current and constant prices have been adjusted to compensate for the effect of a coverage difference between the 1983-84 and previous surveys. (b) Sample survey: the standard error associated with this estimate is \$22m. (c) Sample survey: the standard error is \$14m.

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY BUSINESS ENTERPRISES (a),  
BROAD INDICATORS BY INDUSTRY OF ENTERPRISE (b)**

Industry of enterprise	ASIC code	Description	Enterprises that carried out R & D (number)			R & D expenditure (\$m)			Man-years of effort on R & D		
			1976-77	1978-79	1981-82	1976-77	1978-79	1981-82	1976-77	1978-79	1981-82
11-15		Mining (excluding services to mining)	22	17	23	7.0	9.7	22.6	446	315	381
		<b>Manufacturing—</b>									
21		Food, beverages and tobacco . . . . .	69	84	69	11.6	16.1	13.1	551	545	367
23-24		Textiles, clothing and footwear . . . . .	27	22	16	2.1	1.4	0.8	106	42	24
25		Wood, wood products and furniture . . . . .	22	24	19	0.9	1.6	1.7	50	55	43
26		Paper, paper products, printing and publishing . . . . .	16	14	12	3.3	4.1	5.3	149	144	125
27		Chemicals, petroleum and coal products . . . . .	115	118	124	27.1	35.2	53.1	1,335	1,381	1,231
28		Non-metallic mineral products . . . . .	32	27	22	3.8	4.2	4.8	169	154	109
29		Basic metal products . . . . .	36	35	27	19.0	20.9	27.4	903	776	673
31		Fabricated metal products . . . . .	74	81	80	4.0	4.5	6.7	228	198	161
32		Transport equipment . . . . .	44	47	51	14.6	15.6	31.9	761	604	903
334		Photographic, professional and scientific equipment . . . . .	20	16	25	4.6	6.7	5.1	232	230	160
335		Appliances and electrical equipment . . . . .	129	120	156	21.1	33.1	37.2	1,209	1,234	899
336		Industrial machinery and equipment . . . . .	141	128	153	8.2	8.8	14.7	425	388	413
33		Total other machinery and equipment . . . . .	290	264	334	33.9	48.6	56.9	1,866	1,851	1,472
34		Miscellaneous manufacturing . . . . .	57	58	65	3.5	5.9	7.3	185	210	180
C		<b>Total manufacturing . . . . .</b>	<b>782</b>	<b>774</b>	<b>819</b>	<b>123.9</b>	<b>158.1</b>	<b>209.1</b>	<b>6,306</b>	<b>5,960</b>	<b>5,287</b>
		<b>Other industries—</b>									
F		Wholesale and retail trade . . . . .	90	112	103	9.2	11.4	11.9	381	390	290
63		Property and business services . . . . .	182	169	203	11.2	14.2	18.5	532	472	465
8461		Research and scientific institutions . . . . .	30	29	28	11.7	13.3	21.8	504	460	464
(c)		Other n.e.c. . . . .	62	85	70	39.8	39.1	56.6	1,177	1,030	1,034
16, D-I-K-L		<b>Total other industries . . . . .</b>	<b>364</b>	<b>395</b>	<b>404</b>	<b>71.9</b>	<b>78.0</b>	<b>108.8</b>	<b>2,594</b>	<b>2,352</b>	<b>2,255</b>
		<b>Total all industries . . . . .</b>	<b>1,168</b>	<b>1,186</b>	<b>1,246</b>	<b>202.8</b>	<b>245.8</b>	<b>340.5</b>	<b>9,343</b>	<b>8,626</b>	<b>7,923</b>

(a) Excludes enterprises in ASIC Division A. (b) 1978-79 and 1981-82 data are classified by the 1978 edition of ASIC; 1976-77 data are classified by the 1969 edition of ASIC. If the 1978 edition were used to classify the 1976-77 data shown here only minor differences would occur. (c) ASIC Codes 16, D, E, G-H, 61-62, J-L excluding ASIC class 8461.

**Payments and Receipts for Patent Licence Fees and other Technical Know-How**—Australian business enterprises have significantly supplemented their R & D efforts by either purchasing or licensing foreign or Australian technology. This activity is largely associated with transnational firms. The ABS has estimated that Australian enterprises paid \$127m in 1981-82 for patent licences and other technical know-how of which \$124m was remitted overseas. In 1981-82 Australian business enterprises received \$17m from the sale of patent licences and other technical know-how; \$12m of this was received from overseas sources.

**PAYMENTS AND RECEIPTS FOR TECHNICAL KNOW-HOW BY BUSINESS ENTERPRISES,  
PAYMENTS AND RECEIPTS BY INDUSTRY OF ENTERPRISE  
(\$m)**

Industry of enterprise	Payments for technical know-how			Receipts for technical know-how				
	ASIC code	Description	1976-77	1978-79	1981-82	1976-77	1978-79	1981-82
		<b>Manufacturing—</b>						
21		Food, beverages and tobacco . . . . .	2.9	4.0	14.9	0.3	0.4	-
23-24		Textiles, clothing and footwear . . . . .	1.4	1.2	1.4	n.p.	n.p.	-
25		Wood, wood products and furniture . . . . .	0.1	1.2	1.2	n.p.	n.p.	-
26		Paper, paper products, printing and publishing . . . . .	0.5			n.p.	0.1	n.p.
27		Chemicals, petroleum and coal products . . . . .	16.1	27.4	36.3	2.4	3.2	3.6
28		Non-metallic mineral products . . . . .	4.0	4.4	5.6	0.7	0.9	n.p.
29		Basic metal products . . . . .	3.1	4.0	7.6	1.2	0.6	2.0
31		Fabricated metal products . . . . .	1.4	1.4	3.3	0.8	1.3	0.7
32		Transport equipment . . . . .	7.1	10.1	10.8	0.3	0.5	2.0
334, 335		Photographic, professional and scientific equipment, appliances and electrical equipment . . . . .	12.4	18.6	11.7	0.6	0.9	1.3
336		Industrial machinery and equipment . . . . .	3.8	3.3	3.2	0.6	0.2	0.2
33		Total other machinery and equipment . . . . .	16.2	21.9	14.9	1.2	1.1	1.5
34		Miscellaneous manufacturing . . . . .	3.1	3.9	3.3	0.5	0.5	0.9
C		<i>Total manufacturing . . . . .</i>	<i>55.8</i>	<i>79.5</i>	<i>99.2</i>	<i>7.5</i>	<i>8.8</i>	<i>11.5</i>
		<i>Other industries . . . . .</i>	<i>13.7</i>	<i>29.1</i>	<i>27.4</i>	<i>1.7</i>	<i>6.6</i>	<i>5.9</i>
		<b>Total all industries . . . . .</b>	<b>69.5</b>	<b>108.6</b>	<b>126.6</b>	<b>9.2</b>	<b>15.4</b>	<b>17.4</b>

**General Government Sector.** The estimate of expenditure on R & D carried out in Australia by organisations in the General Government Sector during 1981-82 is \$708m at *current* prices. This represents a 51 per cent increase in expenditure compared with 1978-79. At *constant* (average 1979-80) prices, R & D expenditure is estimated to have increased by 4 per cent over the same period.

The estimate of manpower devoted to R & D carried out by general government organisations during 1981-82 is 17,683 man-years. This represents an increase of 1 per cent compared with 1978-79.

A summary of General Government R & D data for 1981-82 is shown in the tables below.

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY GENERAL GOVERNMENT ORGANISATIONS**

**R & D EXPENDITURE AT CURRENT AND CONSTANT PRICES  
(\$m)**

General government organisations	1976-77	1978-79	1981-82(a)
<b>AT CURRENT PRICES</b>			
Commonwealth . . . . .	289.5	321.2	514.8
State . . . . .	126.3	148.7	193.6
<b>Total . . . . .</b>	<b>415.8</b>	<b>469.9</b>	<b>708.3</b>
<b>AT CONSTANT (AVERAGE 1979-80) PRICES</b>			
Commonwealth . . . . .	398.9	380.8	403.8
State . . . . .	164.6	161.7	160.0
<b>Total . . . . .</b>	<b>563.6</b>	<b>542.5</b>	<b>563.8</b>

(a) Current price estimates for 1981-82 are not strictly comparable with those for earlier years, due to the payment for the first time by some authorities, of their contribution to staff superannuation funds. This discontinuity does not apply to the constant price estimates.

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY GENERAL GOVERNMENT ORGANISATIONS**

**R & D EXPENDITURE AND R & D MANPOWER BY SOCIO-ECONOMIC OBJECTIVE**

<i>Socio-economic objective</i>	<i>R &amp; D expenditure (\$m)</i>			<i>Man-years of effort on R &amp; D</i>		
	1976-77	1978-79	1981-82	1976-77	1978-79	1981-82
<i>National security (defence)</i>	87.6	89.2	113.2	4,232	3,826	3,625
<b>Economic development—</b>						
Agriculture	123.7	153.3	235.9	5,872	5,820	5,678
Forestry and fisheries	20.5	25.1	40.5	860	1,029	1,119
Mining (prospecting)—						
energy sources	4.3	2.3	12.0	201	70	244
other	10.0	10.1	9.1	397	348	236
Mining (extraction)—						
energy sources	0.1	0.8	5.0	—	24	124
other	5.8	5.7	8.7	245	214	228
Manufacturing	34.8	48.2	65.5	1,431	1,548	1,471
Construction	6.9	6.5	7.0	308	268	205
Energy	13.6	20.0	42.7	468	587	731
Transport	11.3	7.2	6.2	410	202	134
Communications	0.2	0.4	0.6	11	15	26
Economic services, n.e.c.	17.6	12.0	22.6	825	494	558
<i>Total economic development</i>	<i>248.9</i>	<i>291.6</i>	<i>455.9</i>	<i>11,028</i>	<i>10,618</i>	<i>10,754</i>
<b>Community welfare—</b>						
Urban and regional planning	3.0	1.3	2.8	128	53	81
Environment	25.4	35.1	36.7	1,163	1,166	876
Health	11.8	16.2	23.1	523	669	826
Education	2.3	1.8	2.7	162	72	99
Welfare	0.7	1.2	1.7	56	58	64
Community services n.e.c.	2.8	2.0	3.6	140	82	85
<i>Total community welfare</i>	<i>46.0</i>	<i>57.7</i>	<i>70.5</i>	<i>2,171</i>	<i>2,099</i>	<i>2,031</i>
<b>Advancement of knowledge—</b>						
Earth, ocean and atmosphere n.e.c.	18.2	8.0	34.3	511	345	542
General advancement of knowledge	15.3	23.5	34.5	594	535	731
<i>Total advancement of knowledge</i>	<i>33.4</i>	<i>31.4</i>	<i>68.7</i>	<i>1,105</i>	<i>880</i>	<i>1,272</i>
<b>Total</b>	<b>415.8</b>	<b>469.9</b>	<b>708.3</b>	<b>18,534</b>	<b>17,424</b>	<b>17,683</b>

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY GENERAL GOVERNMENT ORGANISATIONS**

**R & D EXPENDITURE AND R & D MANPOWER BY FIELD OF SCIENCE**

<i>Field of science</i>	<i>R &amp; D expenditure (\$m)</i>			<i>Man-years of effort on R &amp; D</i>		
	1976-77	1978-79	1981-82	1976-77	1978-79	1981-82
<b>Natural sciences—</b>						
Physical sciences	29.0	35.9	39.9	1,248	1,072	915
Chemical sciences	19.3	21.3	25.5	711	683	562
Biological sciences	56.6	43.6	76.1	2,043	1,539	1,657
Earth sciences	35.3	41.4	73.8	1,515	1,332	1,520
Engineering and applied sciences	127.0	142.1	205.2	5,679	5,478	5,587
Agricultural sciences	122.4	163.3	252.3	5,948	6,333	6,271
Medical sciences	7.9	9.4	13.2	393	420	503
<i>Total natural sciences</i>	<i>397.6</i>	<i>457.0</i>	<i>686.1</i>	<i>17,536</i>	<i>16,859</i>	<i>17,015</i>
<b>Social sciences and humanities—</b>						
Economics	9.0	3.0	6.7	466	157	208
Education	2.5	2.1	2.8	172	82	102
Management	0.9	1.7	0.4	42	65	13
Political science	0.1	0.1	0.1	3	3	2
Sociology	1.3	1.4	1.8	76	60	61
Information science	1.1	1.6	5.0	52	68	122
Other social sciences and humanities	3.4	3.1	5.4	185	130	158
<i>Total social sciences and humanities</i>	<i>18.1</i>	<i>12.9</i>	<i>22.2</i>	<i>996</i>	<i>564</i>	<i>667</i>
<b>Total</b>	<b>415.8</b>	<b>469.9</b>	<b>708.3</b>	<b>18,534</b>	<b>17,424</b>	<b>17,683</b>

**Higher Education Sector.** The estimate of expenditure on R & D carried out in Australia by higher education organisations during 1981 is \$453m at *current* prices. This represents a 39 per cent increase in expenditure compared with 1978. At *constant* (average 1979-80) prices, R & D expenditure is estimated to have increased by 7 per cent over the same period.

The estimate of manpower effort devoted to R & D carried out by higher education organisations during 1981 is 18,241 years. This represents an increase of 7 per cent compared with 1981.

A summary of Higher Education R & D data for 1981 is shown in the tables below.

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY HIGHER EDUCATION ORGANISATIONS**  
**R & D EXPENDITURE AT CURRENT AND CONSTANT PRICES**  
(*\$m*)

<i>Higher education organisations</i>	1976	1978	1981
<b>AT CURRENT PRICES</b>			
Universities . . . . .	239.9	318.8	443.5
CAE's . . . . .	4.2	6.7	9.0
<b>Total . . . . .</b>	<b>244.1</b>	<b>325.5</b>	<b>452.5</b>
<b>AT CONSTANT (AVERAGE 1979-80) PRICES</b>			
Universities . . . . .	317.9	354.8	379.3
CAE's . . . . .	5.7	7.1	7.8
<b>Total . . . . .</b>	<b>323.5</b>	<b>361.9</b>	<b>387.2</b>

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY HIGHER EDUCATION ORGANISATIONS**  
**R & D EXPENDITURE AND R & D MANPOWER BY SOCIO-ECONOMIC OBJECTIVE**

<i>Socio-economic objective</i>	<i>R &amp; D expenditure (\$m)</i>						<i>Man-years of effort on R &amp; D</i>		
	<i>Excluding university overheads(a)</i>			<i>Including university overheads(a)</i>					
	1976	1978	1981	1978	1981	1976	1978	1981	
<i>National security (defence)</i> . . . . .	0.1	0.2	0.6	0.3	0.7	9	15	19	
<b>Economic development—</b>									
Agriculture . . . . .	11.2	19.2	26.5	25.8	35.5	991	1,500	1,554	
Forestry and fisheries . . . . .	1.2	1.4	3.2	2.0	4.3	134	117	167	
Mining (prospecting)—									
energy sources . . . . .	0.2	0.2	1.4	0.3	1.8	24	17	64	
other . . . . .	0.4	0.7	1.4	1.1	1.8	47	62	67	
Mining (extraction)—									
energy sources . . . . .	0.2	0.2	0.7	0.3	1.0	18	18	44	
other . . . . .	0.5	1.3	1.9	1.8	2.4	44	96	104	
Manufacturing . . . . .	5.5	8.5	9.9	11.2	13.0	488	676	583	
Construction . . . . .	1.2	1.6	2.1	2.0	2.7	109	102	107	
Energy . . . . .	3.8	7.1	17.0	9.0	21.7	290	440	764	
Transport . . . . .	1.3	1.8	2.0	2.3	2.6	104	138	98	
Communications . . . . .	0.9	1.7	2.5	2.2	3.2	90	127	143	
Economic services n.e.c. . . . .	6.4	9.6	16.8	12.2	21.0	461	644	677	
<b>Total economic development . . . . .</b>	<b>32.8</b>	<b>53.3</b>	<b>85.4</b>	<b>70.1</b>	<b>110.9</b>	<b>2,800</b>	<b>3,936</b>	<b>4,372</b>	
<b>Community welfare—</b>									
Urban and regional planning . . . . .	1.4	1.8	3.0	2.5	4.0	123	157	161	
Environment . . . . .	3.1	3.6	4.3	4.7	5.7	258	248	256	
Health . . . . .	20.5	47.4	68.2	56.9	87.3	1,412	2,484	3,345	
Education . . . . .	5.4	9.0	13.4	11.4	18.1	494	602	923	
Welfare . . . . .	1.0	2.6	4.4	3.3	5.7	73	167	202	
Community services n.e.c. . . . .	3.0	6.4	8.7	8.1	11.3	184	398	427	
<b>Total community welfare . . . . .</b>	<b>34.4</b>	<b>70.8</b>	<b>102.0</b>	<b>86.9</b>	<b>132.1</b>	<b>2,544</b>	<b>4,057</b>	<b>5,314</b>	
<b>Advancement of knowledge—</b>									
Earth, ocean and atmosphere n.e.c. . . . .	8.2	12.9	20.1	17.6	26.3	700	1,011	1,019	
General advancement of knowledge . . . . .	108.9	116.3	135.9	150.7	182.4	9,233	8,030	7,516	
<b>Total advancement of knowledge . . . . .</b>	<b>117.1</b>	<b>129.3</b>	<b>156.0</b>	<b>168.2</b>	<b>208.7</b>	<b>9,933</b>	<b>9,040</b>	<b>8,535</b>	
<b>Total . . . . .</b>	<b>184.3</b>	<b>253.6</b>	<b>344.0</b>	<b>325.5</b>	<b>452.5</b>	<b>15,290</b>	<b>17,047</b>	<b>18,241</b>	
Universities' contribution . . . . .	180.1	246.9	335.1	318.8	443.5	14,929	16,521	17,699	
CAEs' contribution . . . . .	4.2	6.7	9.0	6.7	9.0	361	526	542	

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY HIGHER EDUCATION ORGANISATIONS  
R & D EXPENDITURE AND R & D MANPOWER BY FIELD OF SCIENCE**

Field of science	R & D expenditure (\$m)								
	Excluding university overheads(a)			Including university overheads(a)		Man-years of effort on R & D			
	1976	1978	1981	1978	1981	1976	1978	1981	
<b>Natural sciences—</b>									
Physical sciences . . . . .	21.4	27.6	38.4	34.4	49.1	1,485	1,638	1,672	
Chemical sciences . . . . .	14.4	18.3	22.1	23.9	29.1	1,136	1,261	1,143	
Biological sciences . . . . .	29.6	43.4	53.9	56.5	73.2	2,518	2,976	3,089	
Earth sciences . . . . .	9.0	10.3	14.4	13.6	18.8	748	750	648	
Engineering and applied sciences . . . . .	19.6	28.0	40.0	36.2	51.4	1,786	2,073	2,145	
Agricultural sciences . . . . .	11.3	18.1	25.2	24.7	33.7	1,096	1,380	1,428	
Medical sciences . . . . .	25.9	38.6	47.3	45.2	59.7	1,692	1,802	2,274	
<b>Total natural sciences</b> . . . . .	<b>131.2</b>	<b>184.3</b>	<b>241.3</b>	<b>234.5</b>	<b>315.1</b>	<b>10,461</b>	<b>11,879</b>	<b>12,399</b>	
<b>Social sciences and humanities—</b>									
Economics . . . . .	6.4	10.0	12.3	12.1	15.2	463	507	462	
Education . . . . .	6.8	7.9	11.7	11.0	16.2	681	790	891	
Management . . . . .	0.7	0.8	3.1	1.0	3.7	40	61	120	
Political science . . . . .	1.5	3.7	5.6	4.8	7.4	121	259	297	
Sociology . . . . .	2.1	3.5	5.0	4.7	6.7	215	274	257	
Other social sciences and humanities . . . . .	35.6	43.4	65.1	57.4	88.3	3,308	3,280	3,813	
<b>Total social sciences and humanities</b> . . . . .	<b>53.1</b>	<b>69.3</b>	<b>102.7</b>	<b>91.0</b>	<b>137.4</b>	<b>4,828</b>	<b>5,169</b>	<b>5,840</b>	
<b>Total</b> . . . . .	<b>184.3</b>	<b>253.6</b>	<b>344.0</b>	<b>325.5</b>	<b>452.5</b>	<b>15,290</b>	<b>17,047</b>	<b>18,241</b>	

(a) University overhead R & D expenditure is an estimate of the R & D component of capital and current expenditures associated with academic services and general university services. See catalogue 8111.0 for further details.

**Private Non-profit Sector.** The estimate of expenditure on R & D carried out in Australia by Private Non-profit organisations during 1981-82 was \$21m at *current* prices. This represents a 66 per cent increase in expenditure compared with 1978-79.



A cheap and efficient method of translating English text into Braille, developed by an Australian computer hobbyist, has improved the educational opportunities for blind and visually impaired children.

*Australian Information Service*

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY PRIVATE NON-PROFIT ORGANISATIONS  
R & D EXPENDITURE AND R & D MANPOWER BY SOCIO-ECONOMIC OBJECTIVE**

Field of science	R & D expenditure (\$'000)			Man-years of effort on R & D		
	1976-77	1978-79	1981-82	1976-77	1978-79	1981-82
National security (defence)	—	—	—	—	—	—
<b>Economic development—</b>						
Agriculture	95	30	36	6	1	3
Forestry and fisheries	—	75	—	—	1	—
Mining (prospecting)—						
energy sources	—	—	—	—	—	—
other	—	—	—	—	—	—
Mining (extraction)—						
energy sources	—	—	—	—	—	—
other	—	—	—	—	—	—
Manufacturing	13	—	—	1	—	—
Construction	—	—	—	—	—	—
Energy	16	10	3	3	1	1
Transport	35	68	196	2	3	12
Communications	—	—	—	—	—	—
Economic services n.e.c.	70	169	512	4	6	18
<i>Total economic development</i>	<i>229</i>	<i>352</i>	<i>747</i>	<i>16</i>	<i>13</i>	<i>34</i>
<b>Community welfare—</b>						
Urban and regional planning	21	35	—	1	4	—
Environment	2	9	—	2	—	—
Health	8,863	9,979	17,758	476	448	563
Education	990	1,554	1,739	59	65	63
Welfare	44	61	420	4	4	22
Community services n.e.c.	116	2	35	5	1	1
<i>Total community welfare</i>	<i>10,036</i>	<i>11,641</i>	<i>19,952</i>	<i>547</i>	<i>522</i>	<i>649</i>
<b>Advancement of knowledge—</b>						
Earth, ocean and atmosphere n.e.c.	6	150	—	—	3	—
General advancement of knowledge	442	422	210	16	9	6
<i>Total advancement of knowledge</i>	<i>448</i>	<i>572</i>	<i>210</i>	<i>16</i>	<i>12</i>	<i>6</i>
<b>Total</b>	<b>10,712</b>	<b>12,566</b>	<b>20,909</b>	<b>579</b>	<b>546</b>	<b>688</b>
Total Expenditure at constant (1979-80) prices (\$m)	13.8	13.7	16.9			

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY PRIVATE NON-PROFIT ORGANISATIONS,  
R & D EXPENDITURE AND R & D MANPOWER BY FIELD OF SCIENCE**

Field of science	R & D expenditure (\$'000)			Man-years of effort on R & D		
	1976-77	1978-79	1981-82	1976-77	1978-79	1981-82
<b>Natural sciences—</b>						
Physical sciences	76	105	183	4	2	6
Chemical sciences	118	112	67	6	2	2
Biological sciences	1,327	2,277	1,668	68	83	48
Earth sciences	11	21	3	1	—	1
Engineering and applied sciences	71	187	220	5	6	14
Agricultural sciences	2	36	36	—	2	3
Medical sciences	7,465	7,898	15,962	397	370	510
<i>Total natural sciences</i>	<i>9,070</i>	<i>10,636</i>	<i>18,139</i>	<i>481</i>	<i>465</i>	<i>583</i>
<b>Social sciences and humanities—</b>						
Economics	24	134	413	1	3	15
Education	1,000	1,557	1,743	60	65	58
Management	5	—	5	—	—	—
Political science	—	—	—	—	—	—
Sociology	121	91	73	11	8	4
Information science	—	9	40	—	1	1
Other social sciences and humanities	492	138	497	25	5	28
<i>Total social sciences and humanities</i>	<i>1,642</i>	<i>1,930</i>	<i>2,770</i>	<i>97</i>	<i>81</i>	<i>105</i>
<b>Total</b>	<b>10,712</b>	<b>12,566</b>	<b>20,909</b>	<b>579</b>	<b>546</b>	<b>688</b>



### Major Government Research Agencies

Information on the science and technology activities and expenditures of Commonwealth Government Ministries and their agencies is provided in the *Science and Technology Statement 1984-85*. Total science and technology expenditures projected by the Commonwealth Government in 1984-85 are shown as \$1,851m, of which \$1,020m was allocated to research and experimental development.

### Commonwealth Scientific and Industrial Research Organization (CSIRO)

The CSIRO is the largest scientific research organisation in Australia. On 30 June 1985 it had a total staff of 7,195 people located in more than 100 laboratories and field stations throughout Australia. About one-third of the staff are scientists.

It is a statutory body established by the *Science and Industry Research Act 1949*. Under the Act, CSIRO replaced the former Council for Scientific and Industrial Research, established in 1926. The organisation was restructured by amendments to the Act in 1978.

Briefly, the functions of CSIRO are:

- conduct of scientific research and application of the results;
- research training and funding;
- maintenance of measurement standards;
- publication and dissemination of scientific information.

When the organisation was first set up, its research centred on solving the problems then facing agriculture and industry. Today, its research extends not only to those areas but into others affecting every Australian—the environment, human nutrition, energy, water resources and information technology.

CSIRO is governed by an Executive comprising three full-time members, including the Chairman, and five part-time Members. An Advisory Council and advisory committees in each State and the Northern Territory, have members appointed to represent the range of interests in the Australian community.

CSIRO's research is carried out in some forty-one Divisions and two smaller units, grouped into the following five Institutes.

*Institute of Animal and Food Sciences:* Divisions of Animal Health, Animal Production, Fisheries Research, Food Research, Human Nutrition, Molecular Biology, Tropical Animal Science, Australian Animal Health Laboratory, Wheat Research Unit.

*Institute of Biological Resources:* Divisions of Entomology, Forest Research, Horticultural Research, Centre for Irrigation Research, Plant Industry, Soils, Tropical Crops and Pastures, Water and Land Resources, Wildlife and Rangelands Research, Laboratory for Rural Research.

*Institute of Energy and Earth Resources:* Divisions of Energy Chemistry, Energy Technology, Fossil Fuels, Geomechanics, Groundwater Research, Mineral Chemistry, Mineral Engineering, Mineral Physics and Mineralogy, Minerals and Geochemistry.

*Institute of Industrial Technology:* Divisions of Applied Organic Chemistry, Building Research, Chemical and Wood Technology, Manufacturing Technology, Protein Chemistry, Textile Industry, Textile Physics.

*Institute of Physical Sciences:* Divisions of Applied Physics, Atmospheric Research, Chemical Physics, Environmental Mechanics, Information Technology Materials Science, Mathematics and Statistics, Oceanography, Radiophysics.

The main role of the Organisation is to plan and execute a comprehensive program of general scientific research on behalf of the Commonwealth.

Research is carried out mainly in the physical and biological sciences, with the emphasis on strategic research. Strategic research is undertaken to achieve practical results and is characterised by its orientation towards the basic research end of the research and development spectrum.

The transfer of research results into commercial use or other beneficial applications is a principal aim of CSIRO. Early in 1985 the Minister launched CSIRO's new industrial company SIROTECH. The company sees its main role as the commercialisation of CSIRO research, but also acts as a national technology transfer body. Other activities are undertaken to the extent that they can be carried out conveniently in conjunction with the Organization's main research and technology transfer activities.

Areas of research presently designated as growth areas are:

- Biotechnology;
- Raw materials processing;
- Manufacturing technologies;

- Human nutrition;
- Information technologies;
- Water and soils;
- Plant diseases;
- Space science and technology.

In 1984-85, CSIRO had a budget of approximately \$380m. About ninety per cent of CSIRO's funds comes directly from the Australian Government and trust funds concerned with various primary industries.

#### **Australian Government Analytical Laboratories (AGAL)**

See entry on page 639.

#### **Antarctic Division, Department of Science**

Australia has been active in research and exploration in the Antarctic region since early this century, but the overall effort has expanded appreciably since 1947 when the Government established the Australian National Antarctic Research Expeditions (ANARE) co-ordinated by the Antarctic Division of the Department of Science.

The Antarctic Division formulates and develops Australia's policies on Antarctic matters consistent with Government objectives; administers the Australian Antarctic Territory and the sub-Antarctic islands under Australian jurisdiction; organises and provides logistic support for the ANARE, including establishment and maintenance of the Antarctic stations at Casey, Davis and Mawson and the sub-Antarctic station at Macquarie Island; and plans and conducts scientific programs approved by the Antarctic Science Advisory Committee (ASAS).

The Australian Antarctic scientific program encompasses research in marine and terrestrial biology, oceanography, earth sciences, glaciology, cosmic ray and upper atmosphere physics, meteorology, bathymetry, medical research, surveying and mapping. Each year, the Antarctic Division, universities and private and public research organisations are invited to submit research proposals to ASAS.

Australia is a signatory to the Antarctic Treaty, and many of its scientific activities in Antarctica are undertaken in collaboration with other signatory countries.

#### **Bureau of Meteorology**

See entry on page 640.

#### **Australian Institute of Marine Science (AIMS)**

The AIMS is located on a 190 hectare site within a national park at Cape Ferguson, 50 kilometres south of Townsville in North Queensland. Comprehensive facilities include laboratories, lecture theatre, library, computer centre, administrative and other support services, a harbour and an ocean-going research vessel.

The Institute's main function is to undertake research; in this regard its activities focus on contributing to an understanding of the tropical marine environment and its associated living communities. Attention is currently concentrated on coral reef and mangrove ecosystems. A multidisciplinary approach is taken to investigate the character of these systems and the manner in which their productivity, diversity, stability and other essential attributes are affected by environment, adaptation and ecological interactions. A significant proportion of the Institute's investigations is undertaken by external collaboration, with an active visiting investigator program being an important means of achieving that objective. The interests of the research staff are necessarily diverse and include physical oceanography, marine chemistry and various aspects of biology, from biochemistry to trophodynamic ecology.

#### **Defence Science and Technology Organisation (DSTO)**

The DSTO, part of the Department of Defence, conducts a significant amount of research and development, mainly in engineering and the physical sciences. Current expenditure is about \$130m per year. Further details on the work of the organisation, and its ten research and testing establishments are found in Chapter 4, Defence.

#### **Australian Atomic Energy Commission (AAEC)**

For information on the AAEC see Chapter 18, Energy.

#### **Engineering Division, Department of Housing and Construction**

To support its operations as the major design and construction authority for the Commonwealth, the Department of Housing and Construction carries out applied research and

laboratory testing and provides a comprehensive range of technical services. In many cases, these services directly or indirectly benefit the needs of private industry and the public.

Research and special testing is conducted mainly by the Engineering Division at establishments such as the Experimental Building Station in Sydney, which specialises in building and building components, and the Central Investigation and Research Laboratory in Melbourne, which specialises in engineering materials and products. The Experimental Building Station undertakes sponsored tests for industry for a fee.

#### **Ionospheric Prediction Service**

See entry on page 640.

#### **Telecom Australia Research Laboratories**

Telecom Australia maintains significant facilities and a staff of approximately 500 for the performance of research and development in telecommunications science and technology.

The primary objective of Telecom's research and development is to evaluate world advances in telecommunications services and systems so that it can select those best suited to the Australian environment. It also applies its research and development facilities to the solution of technical problems arising in the operation of the Australian telecommunications network. Its research and development is co-ordinated with that of industry and academia involved in telecommunications; Telecom supports their efforts with R & D contracts and grants made through the Australian Computer Research Board and the Radio Research Board.

#### **Research in Universities and Colleges of Advanced Education**

The Commonwealth Government is the primary source of funding for research activities in universities. Over half of Commonwealth funding is provided under the *States Grants (Tertiary Education Assistance) Act* which is administered by the Commonwealth Tertiary Education Commission. The general recurrent grants received by universities incorporate funding for research purposes. In addition, special research grants are available for members of academic staff to develop their research activities, for the training of research workers and for post-doctoral fellowships.

The Government is continuing to fund nine Special Research Centres at a cost of \$16.5 million over the 1985-87 triennium. These centres were established in 1981 in various universities under the then Commonwealth Program for the Promotion of Excellence in Research.

Over the 1985-87 triennium a further \$3 million in Commonwealth funds will enable new Key Centres of Teaching and Research to be established in universities and CAEs, to provide high level activity in key fields important to national objectives.

Apart from Key Centres of Teaching and Research, CAEs do not receive special funding for research purposes under the *States Grants (Tertiary Education Assistance) Act*. However, individual members of academic staff are encouraged to seek support for applied research.

#### **Research Organisations Associated with Education Institutions**

In recent years there has been an increase in outside support for research in universities and colleges of advanced education. One source has been research contracts for specific projects from government and industry.

A number of the tertiary education institutions have established independent, commercial companies to promote and manage research and consultancy services to industry, commerce, government and the community. Examples are: Unisearch Ltd, associated with the University of New South Wales; ANUTECH Pty Ltd, associated with the Australian National University; Wait-Aid Ltd, associated with the Western Australian Institute of Technology; Technisearch Ltd, associated with the Royal Melbourne Institute of Technology; SAARD, associated with the Swinburne Institute of Technology; Techsearch Inc., associated with the South Australian Institute of Technology; and The University of Newcastle Research Association.

These organisations play an important role in promoting communications between the Higher Education and other sectors. They undertake investigational and research projects and provide consultancy, technical information and testing services in a range of fields including engineering, management, marketing and the social sciences.

#### **Social Science and Humanities Research**

Research in the social sciences and humanities is undertaken primarily in universities (\$137m out of an Australian total of \$162m for 1981-82). Support for this research comes both from general funds, provided to the universities and from specific granting schemes such as the ARGS.

The bulk of the social science and humanities research carried out within Commonwealth Government agencies is performed as part of the general activities of various departments. In addition, several other Commonwealth Government agencies have an active interest in either sponsoring or undertaking such research. These include the Australian Institute of Aboriginal Studies, the Australian Institute of Criminology, the Bureau of Industry Economics, the Bureau of Agricultural Economics, the Bureau of Transport Economics, the Bureau of Labour Market Research, the Institute of Family Studies and the Australian Institute of Multicultural Affairs.

Agencies of the various State governments undertake research relevant to their own activities. A number of research organisations in the transport sphere are funded from both Commonwealth and State sources. The Australian Road Research Board and the Australian Railway Research and Development Organisation are active in social science research.

Exchange of ideas and information on the social sciences is promoted through a number of professional and learned bodies, of which the Australian and New Zealand Association for the Advancement of Science and the Academy of Social Sciences in Australia are the most broadly based. In addition to encouraging the advancement of the social sciences, the Academy sponsors and organises research, subsidises publications and acts as a consultant and advisor in the social sciences field.

Non-government bodies which undertake or promote research in specific fields of the social sciences include the Australian Institute of International Affairs, the Australian Institute of Urban Studies, and the Australian Institute of Political Science.

## **International Activities**

### **International Organisations**

Australia participates in a range of programs and projects of United Nations and other organisations (UNESCO, OECD, United Nations Economic Program, World Meteorological Organisation, World Intellectual Property Organisation and International Atomic Energy Association) and in the activities of both governmental and non-governmental scientific organisations. To facilitate scientific and technological liaison, the Commonwealth Government has scientific representation at Tokyo, Paris (OECD), London, Bonn and Washington. In November 1982, Australia was elected a member of the Intergovernmental Oceanographic Commission Executive Council. Australia also participates in regional collaborative programs organised by the Economic and Social Commission for Asia and the Pacific, the Association of South-East Asian Nations (ASEAN), the Association for Science Co-operation in Asia, the Commonwealth Science Council and the Pacific Science Association. Technical assistance is provided for countries in the region under both multilateral and bilateral arrangements.

Participation in international non-governmental scientific bodies is arranged through learned and professional bodies. For example, the Australian Academy of Science provides representation to the International Council of Scientific Unions (ICSU) and a number of its affiliated bodies.

### **Antarctic Treaty and Conservation of Antarctic Marine Living Resources**

In 1957, as part of the International Geophysical Year (IGY), twelve nations including Australia co-operated in research programs in Antarctica. The outstanding co-operation between nations in the Antarctic during the IGY resulted in discussions which culminated in the establishment of the Antarctic Treaty. It was signed on 1 December 1959 by the nations that had been active in Antarctica during the IGY, including all of those with territorial claims. The original signatories were Argentina, Australia, Chile, France, New Zealand, Norway, UK, Belgium, Japan, South Africa, the USSR and the USA. Since then, six additional nations have been accorded consultative status. They are: Poland, the Federal Republic of Germany, India, Brazil, China and Uruguay. The Treaty, which was ratified by Australia in 1961, among other things reserves the Antarctic area south of 60°S latitude for peaceful purposes, provides for international co-operation in scientific investigations and research, and preserves for the duration of the Treaty the legal positions of signatories to the Treaty with regard to territorial sovereignty, rights and claims.

The Treaty makes provision for other states with non-consultative status to accede to it. Fourteen nations have acceded: German Democratic Republic, Czechoslovakia, Romania, Denmark, the Netherlands, Papua New Guinea, Peru, Italy, Bulgaria and Spain.

Australia hosted the first Antarctic Treaty Consultative Meeting in July 1961 and the twelfth in September 1983. Observers from the contracting parties to the Treaty, which are not also consultative parties, were invited for the first time to the twelfth meeting held in Canberra in September 1983.

The consultative parties have formulated a number of measures to protect the Antarctic environment and ecosystem. The environment of the Australian Antarctic Territory is protected by the *Antarctic Treaty (Environment Protection) Act 1980*, and by recommendations of Treaty meetings that the Australian Government has adopted.

At a diplomatic conference in Canberra in May 1980 the Treaty consultative partners adopted the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR). The Convention establishes the basis for a conservation and management regime for the entire ecosystem of the area south of the Antarctic Convergence (about 45° to 56°S). The headquarters of the CCAMLR Commission, established under the Convention, is in Hobart. Twenty nations and the European Community have signed the Convention which is open to accession by any country. Australia was elected to provide the first Chairman of the Commission, and an Australian has been appointed as first Executive Secretary.

Australia is also participating in meetings to negotiate a regime to regulate exploration for and exploitation of Antarctic minerals. The first meeting was held in Wellington, New Zealand, in June 1982. The most recent meeting was in Paris in September 1985.

### **Studentships and Fellowships**

Australia has assisted other countries, principally in the Asian and Pacific regions, by training their nationals. Large numbers of such students, mainly seeking first qualifications at tertiary level, have been accommodated under schemes such as the Colombo Plan. There are also arrangements under which established scientists from overseas are assisted to undertake study and research in Australia.

### **Bilateral Arrangements**

Various bilateral arrangements at both government and non-government levels have contributed to the development and maintenance of co-operation in science and technology between Australian institutions and scientists and those in other countries. Formal bilateral agreements reflect two major aspects: the importance of a regular flow of scientific and technological information into Australia; and the significance of Australian science, technology and industrial property systems in assisting the economic growth of less developed countries. These agreements, solely devoted to scientific and technological co-operation, have been entered into with the USA (1968), India (1975), the USSR (1975), the Federal Republic of Germany (1976), Japan (1980), the Peoples Republic of China (1980) and Mexico (1981). Support is provided for both individual visits and specialist seminars over the whole range of civil science. Where opportunities exist, other co-operative projects which depend on special facilities are supported.

A scientific exchange program between the Australian Academy of Science and the Academia Sinica of Beijing was initiated in 1977. Scientific fields considered most promising are plant physiology, entomology, earth science and radio astronomy.

Visits to Japan and China by Australian scientists can be supported by the Australia/Japan Foundation and the Australia/China Council respectively.

### **Meteorology**

Australia is a member of the World Meteorological Organization (WMO), with the Director of Meteorology being Australia's Permanent Representative on WMO.

### **Optical Astronomy**

The Anglo-Australian Telescope Board was established under the provisions of an international agreement between Australia and the United Kingdom and draws its funds in equal shares from each country. It operates the 3.9 metre Anglo-Australian Telescope at Siding Spring Mountain near Coonabarabran in New South Wales; the Telescope is among the largest in the world and came into full scientific operation during 1975. Its technical excellence and the scientific work which it has made possible have made it widely recognised as one of the world's foremost optical telescopes.

### **Space**

An agreement by the Governments of Australia and the USA to co-operate in the establishment and operation in Australia of space vehicle tracking stations was signed in 1960

and has been renewed since then at ten-year intervals. The agencies for the Australian and US Governments are the Department of Science and the National Aeronautics and Space Administration (NASA) respectively.

As part of the world-wide network supporting NASA's space program, the Australian stations track spacecraft in their orbits around the earth or on their journeys into space, receive telemetered data from the spacecraft, and relay radio commands controlling the spacecraft.

The Department of Science is responsible for managing, staffing and operating the tracking stations on behalf of NASA. The stations are located at Tidbinbilla in the Australian Capital Territory and at Yarragadee in Western Australia. A communications system links them with control centres in the US.

Expenditure by NASA on its tracking station operations in Australia in 1984-85 was about \$13m.

An agreement was signed in 1979 between the Commonwealth Government and the European Space Agency (ESA) for the establishment and operation of a space vehicle tracking facility in Australia in support of ESA programs. The facility is located at the site of the Overseas Telecommunications Commission (Aust.) earth station at Carnarvon, W.A.

### **Seismology**

A comprehensive seismic station at Alice Springs (Joint Geological and Geophysical Research Station) is operated jointly under an agreement between the Governments of Australia and the United States of America. The agencies for the Governments are, respectively, the Department of Resources and Energy and the United States Air Force.

The station provides continuous seismic records to assist the United States Government in the identification of underground nuclear explosions and provides seismic records to the Bureau of Mineral Resources. Records are also available, through the Department of Resources and Energy, to Australian scientists for research in earth physics.

### **Defence**

In the field of defence science, Australia collaborates with other countries through a variety of arrangements at intergovernmental level. Further information including defence science technology arrangements is given in Chapter 4, Defence.

### **Transport**

Through a variety of arrangements at intergovernmental level, Australia is represented at Federal and State levels in a number of international organisations concerned with transport research. Further information is given in Chapter 20, Transport and Communications.

### **Other**

At the non-governmental level, formal arrangements for scientific co-operation with counterpart institutions in other countries have been concluded by a number of Australian bodies. For example, an arrangement covering co-operation in astronomy exists between the University of Sydney and Cornell University (USA), while over a broader area the Australian National University has an arrangement with the University of Moscow which includes exchanges in the scientific fields.

## **Additional information**

Additional information on topics presented in this chapter may be found in the annual reports of the organisations mentioned, particularly the Department of Science, the Department of Industry, Technology and Commerce, the CSIRO and its divisions, the Australian Atomic Energy Commission, the Department of Defence, the Australian Industrial Research and Development Incentives Board and in the annual *Science and Technology Statements*. Statistical information for the years 1968-69, 1973-74 and 1976-77 may be found in the reports published by the (then) Department of Science and Technology on Project SCORE. Statistical information relating to 1978-79, 1981-82 and 1984-85 may be obtained from the Australian Bureau of Statistics (ABS). See paragraphs on expenditure and human resources devoted to Research and Experimental Development (in this chapter) for details of ABS publications.

In 1984 the OECD, at Australia's request, examined ways in which Australian science and technology policies may be developed in the next five years, with particular attention to existing aims, to strengthen Australia's scientific and technological capabilities, develop new

and revitalised industries and achieve greater co-ordination between science and technology policies and economic, industry, education, manpower and social policies. The OECD response was published in 1985 and was the subject of considerable public discussion.

During 1985 Australia launched AUSSAT communications satellites. Further information is given in Chapter 20, Transport and Communication.

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### IN RETROSPECT.....Year Book No 19 (1926)

The initial step towards the establishment of a Solar Observatory in Australia was taken on 4th March, 1907, when, as the result of a letter communicated to the press of South Australia, inquiry was made into the possibility of the Adelaide Observatory undertaking this work. Subsequently the movement received the support of the International Solar Union, the Royal Society, the British Association for the Advancement of Science, the Australasian Association for the Advancement of Science, the Smithsonian Institution, and various other scientific bodies throughout the world, and in April, 1908, a memorandum was presented to the Prime Minister setting forth the reasons why a solar station in Australia is desirable. As the result of inquiries among the State Observatories, it was found that none of them had the necessary funds or equipment for undertaking the work.....

As a result of the public support which the movement had received, in December, 1909, the Prime Minister took the first official action towards the establishment of the Observatory by accepting the gift of a 9-inch refracting telescope from Mr. James Oddie, of Ballarat, and by placing on the Estimates a sum of money sufficient for the erection of a temporary building within the Federal Capital area wherein to house the telescope in order that the suitability of this site might be examined. On 19th March, 1910, a conference of surveyors at Canberra, attended also by the Government Astronomer of Victoria, and by the Commonwealth Meteorologist, recommended that Mount Stromlo should be the site of the temporary observatory.

## AUSTRALIA AND COMET HALLEY, 1985-1986

*(This special article has been contributed by the Mount Stromlo and Siding Spring Observatories, Australian National University)*

The return of Comet Halley to the inner solar system during 1985-86 has resulted in the most intensive observational effort ever devoted to a single astronomical object. Australian astronomers, as part of the International Halley Watch network, are playing a major role in this effort.

Comet Halley was named in honour of the noted English astronomer and mathematician, Edmond Halley (1656-1742) who in 1705 published calculations showing that comets observed in 1531, 1607 and 1682 were really the one comet. He predicted its return in 1758 and it was sighted late that year, passing perihelion (nearest point of orbit to the sun) in March 1759.

Later calculations identify it with the large bright comet seen during the Norman Conquest of England in 1066 and with other comet sightings at intervals of about 76 years from 240BC.

Bright comets have always been a source of wonder, excitement and (in past times) fear; even today the physical and chemical composition of comets is not fully understood. The present apparition of Comet Halley provides an unprecedented opportunity to vastly increase our knowledge of these visitors from the outer limits of our solar system.

Comets are thought to enter the solar system from a vast swarm of primordial debris known as the Oort cloud. This cloud contains the remnants of material from the time of formation of the solar system and is thought to extend about 2 light years (19,000,000,000,000 km) beyond the known planets. Occasionally, about once every 100,000,000 years, another star passes close to the Oort cloud. The gravitational effects of this passage 'scramble' the orbits of the comets and some begin to fall in towards the sun. The comet thus becomes an infalling sample of the solar system's remote past, and by studying it astronomers can learn something of what the conditions were that led to the evolution of the solar system and, ultimately, to human life.

When they first leave the Oort cloud, comets are small bundles of ices (mainly water with traces of hydrocarbon nitrocarbon compounds) and dust, up to a few tens of kilometers in diameter. As they approach the sun, solar radiation heats the comet and the ice and gasses boil out of it. Interaction with the solar wind (the stream of charged particles that flow out of the sun) blows the gasses back from the head of the comet and causes them to fluoresce forming an ion tail which always points away from the sun. Dust particles are also lost from the comet and are strewn along the comet's orbit to form a dust tail which may lie in a different direction to the ion tail. When a comet is close to the sun it thus consists of a head (or nucleus), surrounded by a coma (the bright gasses expelled from the nucleus) and having an ion tail of fluorescent gasses and a dust tail. Also surrounding the nucleus is an immense cloud of atomic hydrogen, coming from the breaking up of water molecules in the coma; this hydrogen cloud may grow to the size of the sun.

Most comets fall into elliptical orbits around the sun, with the sun at one focus and a point in the Oort cloud at the other, returning to the inner solar system at long intervals (up to millions of years). Over several passages this orbit may be severely perturbed by the gravitational effects of the planets, particularly Jupiter, and the comet may become 'trapped' inside the solar system, having a shorter orbital period and never returning to the Oort cloud.

The importance of Comet Halley lies in the fact that it is the only fairly young comet for which the period is accurately known, and which has predictable return dates in the near future. It is therefore possible to plan experiments well ahead of the expected return time. During the current passage, Comet Halley will be studied from ground-based observatories, and from a fleet of spacecraft which will rendezvous with the comet in March, 1986. Australian astronomers have a vital role to play in these observations since during the time when the comet is at maximum brightness during March and April, 1986, and at the time of its closest approach to earth on April 11, 1986, Comet Halley will be far south in the sky, inaccessible to the major observatories in the northern hemisphere.



The CSIRO radio telescope at Parkes, N.S.W. is the vital link in communication with the most complex of the spacecraft, the European Space Agency's GIOTTO, due to pass within 500 km of the comet nucleus on March 13, 1986. GIOTTO carries cameras which may provide our first close-ups of a cometary nucleus, as well as experiments designed to sample the chemistry and magnetic fields inside the comet. Since there is a high probability that GIOTTO will be destroyed during its 'close encounter', all data is instantly transmitted to Parkes, thence to Darmstadt, West Germany, for processing. As well as monitoring the GIOTTO encounter, CSIRO scientists will use the Parkes telescope and their smaller millimeter-wave telescope at Epping, N.S.W., to investigate the hydrogen halo and the molecular compounds present in the comet.

From Mount Stromlo, near Canberra, A.C.T., astronomers of the Australian National University's Mount Stromlo and Siding Spring Observatories will be observing Comet Halley at optical wavelengths using the observatory's 1.9 m and 0.8 m telescopes and advanced technology detectors designed and built at the observatories. Experiments planned from Mount Stromlo concentrate on spectroscopic studies, investigating the detailed physical and chemical make-up of the comet, plus infra-red studies, investigating the complex molecules and dusty compounds in the comet.

At the A.N.U.'s Siding Spring Observatory, near Coonabarabran, N.S.W., no less than eight optical telescopes will be involved in the onslaught on Comet Halley. These telescopes include some of the world's most modern telescopes; the brand-new A.N.U. 2.3 m Advanced Technology Telescope (the ATT), the Anglo-Australian Observatory's 3.9 m reflector (the AAT), and the United Kingdom Science and Engineering Research Council's 1.2 m Schmidt camera.

Experiments planned for the AAT, the largest and best-equipped telescope in the southern hemisphere, concentrate on the detailed structure of the comet. The observations include photography of the comet's head, using both conventional cameras and charge-coupled diode arrays (CCDs), and infra-red spectroscopy, which provides information about the molecules and gasses present in the comet.

The most spectacular photographs of Comet Halley are likely to come from the U.K. Schmidt. This telescope is specially designed to have a wide field of view and will be able to photograph both the head and tail of the comet on the one plate for most of the comet's passage. The Schmidt has been photographically monitoring Comet Halley since August, 1985.

A.N.U. astronomers at Siding Spring will be using six telescopes, ranging in size from the 2.3 m ATT to an ultra-high-speed 20 cm Schmidt camera. A full range of optical investigations is planned; photography, mapping the changing structure of the comet; photometry, monitoring the brightness and colour; polarimetry, investigating the interaction of the comet with the solar magnetic field, and the nature of the dust particles; infra-red observations, studying the molecules and dust; and spectroscopy, the most powerful tool of the astronomer, providing detailed measurements of the physics and chemistry of the comet. Prime telescope will be the 2.3 m, which has the unique facility of being able to change the mode of observation in a matter of seconds, making it possible to run, e.g., spectroscopic and photographic observations practically simultaneously. Coupled with the Mount Stromlo Photon Counting Array, the most advanced light-detecting system in the world, the 2.3 m has a major role to play in the study of Comet Halley.

By the time that Comet Halley leaves the inner solar system toward the end of 1986 the efforts of Australian astronomers will have vastly increased our knowledge of comets, our solar system, and the first steps in the evolution of life.

## CHAPTER 26

# CULTURE, ENVIRONMENT, RECREATION AND TRAVEL

In recent years public interest in quality of life issues—cultural affairs, environment and heritage—has increased markedly. The Commonwealth Government has accepted national responsibility for these matters and through its Department of Arts, Heritage and Environment and a range of statutory bodies, undertakes many initiatives to protect Australia's heritage and environment and to promote the arts, national arts institutions and the film and television industries.

The Department has a policy rather than operational orientation, being responsible primarily for advice to the Government on the general direction of policies and programs in the areas it covers. The operational activities are conducted by the many statutory authorities and other bodies within the Arts, Heritage and Environment Portfolio. These cover a very broad and diverse spectrum and include the Australian Archives, the Australia Council, the Australian Film Commission, the Australian Heritage Commission, the Australian National Gallery, the Museum of Australia, the National Library of Australia and the Australian National Parks and Wildlife Service.

## CULTURAL ACTIVITIES

The Arts in Australia receive considerable financial support from the Commonwealth Government. This support is complemented by State, Territory and Local Government funding mechanisms. These tiers of government now provide funds for virtually all aspects of artistic and cultural life—theatre, music, literature, painting, crafts, sculpture, Aboriginal arts, film, radio and television broadcasting and libraries, art museums and performing arts centres. Major arts facilities have opened in Canberra, Sydney, Melbourne, Brisbane, Perth, Adelaide and Darwin. A significant growth in the number of regional art museums and performing arts centres has also occurred. In the past decade an increased number of major international art exhibitions have toured capital cities. The importance of community arts has gained recognition and there has been a renaissance of the Australian film industry.

Governments in Australia have thus assumed the function of public patrons of the arts, on the grounds that many culturally important and socially enriching activities would not take place unless public funds were provided.

The Commonwealth Government formulates policy guidelines for the support of the arts generally and allocates funds annually to the national arts institutions under its jurisdiction. Commonwealth/State consultation on cultural matters takes place through such bodies as the Cultural Ministers Council, the Australian Libraries and Information Council and the Advisory Committee on National Collections.

### Australia Council

The Australia Council is the Commonwealth Government's chief funding body and policy adviser for the arts. Established as a statutory authority in 1975, its responsibilities are detailed in the *Australia Council Act 1975*. Broadly speaking the Council's brief is to formulate and carry out policies to help raise the standards of the arts in Australia, to enable and encourage more Australians to become involved in the arts and to enable Australians and people in other countries to become aware of Australia's cultural heritage and achievements. Artists and arts organisations are assisted financially by the Council through its specialist art form Boards in Aboriginal Arts, Community Arts, Crafts, Design Arts, Literature, Music, Theatre and Visual Arts.

The Council also maintains several other programs in support of International Activities, Multicultural Arts, Education and the Arts, Youth Arts, Touring and Access, Artists in the Community, and Art and Working Life.

Membership of the Council is intended to represent a broad cross-section of the arts community as well as to ensure access to knowledge and experience relevant to the work of the Aboriginal Arts.

**ALLOCATION OF FUNDS FOR PROGRAMS, BOARDS AND ADMINISTRATION OF THE AUSTRALIA  
COUNCIL, 1985-86  
(\$'000)**

<b>Boards</b>	
Aboriginal Arts . . . . .	2,635
Community Arts . . . . .	3,281
Crafts . . . . .	2,020
Design Arts . . . . .	543
Literature . . . . .	2,811
Music . . . . .	11,267
Theatre . . . . .	12,433
Visual Arts . . . . .	2,244
<i>Total boards . . . . .</i>	<i>37,234</i>
<b>Programs</b>	
Arts Information . . . . .	439
Inter-board . . . . .	718
International . . . . .	246
Policy and Research . . . . .	246
Touring and Access . . . . .	888
<i>Total programs . . . . .</i>	<i>2,537</i>
Total support for the arts . . . . .	39,771
Administration . . . . .	7,229
<b>Total appropriation . . . . .</b>	<b>47,000</b>

#### **Aboriginal Arts**

The Aboriginal Arts Board supports activities involving the preservation and continuation of traditional cultural practices and their associated arts forms as well as the generation of new artistic expression among Aboriginal people in urban and country areas.

#### **Community Arts**

The Community Arts Board assists community involvement by encouraging the development of the closer integration of arts practice into everyday life and growth of an independent culture that reflects the diverse composition of Australian society.

#### **Crafts**

The Crafts Board encourages continuing improvement in the quality of crafts practised in Australia and provides greater opportunities for craftspeople to further their professional development.

It fosters wider community access to the crafts and promotes an awareness of Australian crafts overseas and of work of other countries in Australia.

#### **Design Arts**

The Design Arts Board encourages excellence in design in architecture, the performing arts, fashion and textiles, engineering, industrial, interior and graphic design, landscape architecture and planning. The Board believes that fostering excellence in design will improve the amenity of daily life as well as assist the competitiveness of Australian industry and contribute to the development of a national cultural identity.

#### **Literature**

The Literature Board encourages all forms of Australian creative writing through direct grants to writers and the subsidising and promotion of the resultant works. More than half of the Board's annual expenditure goes in grants to writers to meet travel, research and other expenses.

#### **Music**

The Music Board encourages and supports the development of music in Australia and the promotion of Australian music and musicians overseas. Financial assistance is provided by the Board for a range of musical activities grouped under four main headings: Composition, Documentation, Community Development and Music Education and Performance.

Australia has eight fully professional orchestras which include a symphony orchestra in each State capital city. They are managed by the Australian Broadcasting Corporation. The other two, the Elizabethan Theatre Trust Orchestras, are predominantly engaged in work with The Australian Opera (Sydney) and The Australian Ballet (Melbourne).

**Theatre**

The Theatre Board seeks to foster the development of performance, content and production of dance, drama, puppetry, mime and young people's theatre, which stems from and relates to the Australian experience. The Board provides opportunities for professional theatre people to develop their skills, encourages growth in theatre attendance and promotes community involvement in live theatre.

It provides continuing support for some 80 drama, dance, puppetry, mime and youth companies which attract audiences running into millions annually.

**Visual Arts**

The Visual Arts Board provides assistance to individuals and organisations working across a wide spectrum of the visual arts in Australia, from painting and sculpture to museology. Its programs include grants to individuals, the commissioning and placing of works of art in public places, research and writing on the visual arts, support for artists in residence and the acquisition, exhibition and conservation of works of art.

## **Commonwealth Schemes in Support of the Arts**

**Artbank**

Artbank is a unit of the Department of Arts, Heritage and Environment set up to encourage Australian artists through the purchase and public display of their work, thereby complementing other Commonwealth art support schemes. Since its inception in 1980 the Artbank collection has grown to more than 3,400 works, including painting, artists' prints, sculpture, photography, Aboriginal art, and craft.

**Historic Memorials Committee**

The Historic Memorials Committee was established in 1911 to secure portraits of distinguished Australians who took an active part in Federation. Later the Committee decided to obtain portraits or other representations of all Governors-General, Prime Ministers, Presidents of the Senate, Speakers of the House of Representatives, Chief Justices of the High Court of Australia and other distinguished Australians. In addition, the Committee has commissioned paintings or other representations recording special events connected with the Commonwealth Parliament and, more recently, the High Court of Australia. The Collection is located in Parliament House.

**Commonwealth Indemnification of Exhibitions**

In 1979 the Commonwealth introduced a scheme under which national and international touring art exhibitions could be approved for Commonwealth indemnity against loss or damage of the works involved. The scheme ensures that the Australian public has the opportunity to see major international and Australian touring art exhibitions which would be uneconomic without indemnity due to the prohibitive cost of insuring such major works. The scheme also covers Australian exhibitions travelling overseas, sponsored by the Australia Council, for which indemnity is not available from the host country and without which Commonwealth indemnity could not proceed.

Thirty-three exhibitions were indemnified by the Commonwealth between 1979 and 1985. They ranged from traditional Aboriginal artefacts through ancient Chinese and European archaeological finds to paintings, prints and drawings from a wide variety of countries, styles and schools.

**Public Lending Right Scheme**

The Public Lending Right Scheme, established by the Commonwealth Government in 1974, makes compensatory payments to Australian authors and their Australian publishers for the use of their books in public lending libraries. Eligible books must be created by Australian citizens and residents and meet certain pagination requirements.

The Scheme aims to resolve the apparent conflict between providing a free library system and ensuring that Australian writers, editors and other creators receive a fair payment for the use of their books.

The Scheme's annual payments amount to approximately \$1,500,000. Payments to authors and publishers are based on annual sample surveys of bookstocks of public lending libraries throughout Australia.

### **Taxation Incentives for the Arts**

The Taxation Incentives for the Arts Scheme came into operation on 1 January 1978 under section 78 of the *Income Tax Assessment Act 1936*. The Scheme encourages the donation of gifts in kind to public art galleries, museums and libraries by allowing donors a taxation deduction.

Donations to approved institutions under the Scheme are valued by two or more approved valuers and the average of the valuations may then be claimed by the donor as a taxation deduction for the year in which the gift was made.

By 30 June 1985, 115 institutions throughout Australia had benefited under the Taxation Incentives for the Arts Scheme. The value of donations made to them under the Scheme was \$19.4 million. Donations worth \$1.8 million were made during the 1984-85 financial year.

### **Other Arts Organisations**

#### **Arts Council of Australia**

The Arts Council of Australia is a community based incorporated body funded through the Community Arts Board of the Australia Council and State Government arts authorities. The Central Secretariat of the Council is in Sydney, with Divisions in all States and Territories.

The Arts Council's historical role of providing quality artistic experiences mainly in country areas by way of centrally-organised tours has changed over the last few years. Access to and participation in a much wider range of arts experiences is provided through traditional tours by State theatre, opera and ballet companies, local festivals and workshops, theatre-in-education teams and artists-in-residence. The voluntary committees, which number about 250 throughout Australia, receive support, help and training from the nine professionally-staffed head offices.

The Arts Council also administers grants on behalf of other bodies such as the Australia Council, State arts authorities and other government departments.

#### **Australian Elizabethan Theatre Trust**

The Australian Elizabethan Theatre Trust, established in 1954, was originally formed to present drama, opera, ballet and puppetry throughout Australia. Full autonomy has now been accorded to most of the performing companies established by the Trust. The Trust's major functions now are to administer the Elizabethan Theatre Trust Orchestras; to act as entrepreneur in the touring of theatre features from overseas and Australian sources; and to provide general services, including tax deductibility for donations, for theatre organisations.

The Trust receives annual grants from the Australia Council and State and local governments. Its revenue is supplemented by subscriptions, donations and its own activities.

#### **Ballet**

The Australian Ballet Foundation gave its first performance on 2 November 1962. The Company is now Australia's major classical ballet company, providing a balanced repertoire of full length classical ballet and new works. Based in Melbourne, the Company of 55 dancers regularly tours to most State capital cities and has made several overseas tours.

#### **Festivals**

The number of festivals devoted solely or partly to the arts now totals about 400 a year. The two biggest are Adelaide's biennial and Perth's annual festivals, both of which last several weeks and present overseas artists as well as leading Australian companies.

Many country centres now have arts festivals which attract performers and artists from a wide area. Seminars, arts workshops and community participation programs are increasingly popular.

#### **Australian Opera**

The Australian Opera is the largest performing arts organisation in Australia employing over 200 permanent staff including 34 principal singers and a chorus of 48. In addition, it employs over 500 casuals each year, including a number of celebrated international singers. The projected budget for the Opera in 1985, excluding the cost of orchestras, is over \$18 million. This is derived from the following sources—49 per cent box office, 29 per cent government subsidy, 27 per cent private contributions. The Opera, headquartered in Sydney, tours annually to Melbourne, Brisbane and Canberra. Free opera performances in the parks and television and radio activities are increasingly being utilised by the company to provide all Australians with access to opera.

### **Musica Viva**

Musica Viva Australia, a non-profit society receiving financial support from the Music Board of the Australia Council and several State governments, seeks to increase the performance, knowledge and appreciation of chamber music through subscription concerts, festivals, workshops and education activities. Musica Viva presents concerts by distinguished overseas ensembles and by groups of leading Australian musicians and organises overseas commercial tours for Australia's leading ensembles. In 1984 the society managed over 1,000 concerts within Australia and overseas.

### **International Cultural Corporation of Australia Ltd**

The International Cultural Corporation of Australia Limited was established in 1980 by the Commonwealth Government to arrange and manage international exhibitions of art and culture.

The principal activities of the Corporation are three-fold. It brings to the Australian people significant overseas collections of art and antiquities, and other exhibitions of artistic, cultural and historical interest for display in galleries and museums. Secondly, on behalf of the Australian Government, the Corporation sends overseas Australian art and other important examples of national cultural achievements. Finally, the Corporation offers expertise and assistance to Commonwealth, State and overseas governments and to galleries and museums.

## **Film**

Encouragement of the Australian film industry is a firm policy objective of the Commonwealth Government. The following funds were allocated to film-related organisations for 1985-86:

- Australian Film Commission—\$21.7m (includes \$6m for the special production funds)
- Australian Film and Television School—\$8.5m
- Australian Children's Television Foundation—\$0.5m
- National Film and Sound Archive—\$2.6m

### **Australian Film Commission**

The Australian Film Commission is a statutory authority established in 1975 to encourage the development and growth of an indigenous film industry.

The Commission addresses this responsibility by managing the expenditure of over \$28 million on film production and financial assistance to independent filmmakers, by offering a legal, business and marketing advisory service, and by producing films for Government departments and programs in the national interest.

The Film Development Division, through the Script Office and various funds (Creative Development, Special Production, No Frills and Women's Film Funds) provides financial support to individuals for script development and production, and offers financial facilities for projects entering production. In addition to these responsive funds, specific programs have been introduced to target particular industry needs. These programs concentrate on developing skills with a select group of film makers. They include a Documentary Fellowship, a Producer Support Scheme and a Comedy Fund.

Film Australia is the Commission's film and video production unit, producing about 75 projects (predominantly documentaries) each year, which are marketed in over 26 languages. Programs are made for client Government departments, and on a range of social, cultural, educational and scientific issues. Film Australia distributes its programs via government film libraries, and lodges selected titles in Australian overseas missions.

The executive division incorporates the Marketing and Communications Branch and the Policy Unit. Marketing and Communications is essentially an information and marketing service for producers and buyers. It represents the Australian film industry internationally, provides marketing loans, and co-ordinates the Commission's corporate communications and public relations profile. The Policy Unit identifies key issues and developments which affect the industry, and researches and canvasses these issues with the industry and Government. The Corporate Affairs Division handles all the financial, business and legal affairs for the Commission as well as administering the Film Exemption Scheme.

Thirty-four features and thirteen mini-series were produced in 1984-85 for approximately \$116 million, making it one of the industry's most productive years.

Australian films continue to attract international interest, with the release of *Mad Max: Beyond Thunderdome* proving extremely successful. Other recent films to attract critical attention were *My First Wife*, *The Coca-Cola Kid*, *Careful He Might Hear You* and *Silver City*. New productions expected to perform well are *Burke and Wills*, *For Love Alone*, *Rebel*, *Crocodile Dundee* and *The Fringe Dwellers*.

The domestic market for Australian films has changed significantly in the past two years with video recorders in an estimated 39% of households. This video growth contributed to a 30% decline in cinema attendances, a trend which has been countered to some extent by innovative promotions and good programming. Attendances in 1985 have, as a result, improved 12% on 1984.

#### **Taxation Incentives for Films Scheme**

The Scheme which is embodied in Division 10BA of the *Income Tax Assessment Act 1936* was established in October 1980 to encourage private investment in Australian films. The Scheme allows taxation concessions for private investors in qualifying Australian films which have been issued with a certificate to that effect by the Commonwealth Minister for Arts, Heritage and Environment.

Qualifying Australian films are feature films and films of a like nature for television; documentaries; and mini-series of television drama. Further they must be produced principally for public exhibition in cinemas or on television, be substantially made in Australia and have a significant Australian content.

Film budgets totalling \$185.7m were secured by investment under the Scheme in the 1984-85 financial year. In recent years there has been a significant increase in the number of mini-series financed under the Scheme.

#### **Australian Children's Television Foundation**

The Australian Children's Television Foundation was incorporated in Victoria in March 1982. Its aim is to improve the quality and quantity of children's programs on Australian television. It has actively pursued this objective by investing in script development and program production and by undertaking related educative and informational activities. The Foundation receives assistance from Federal, State and Territory Governments (with the exception of Queensland). In 1985-86 \$0.5m is to be provided by the Commonwealth with a matching contribution sought from the other participating governments on a State/Territory per capita basis.

#### **Film Censorship**

The Commonwealth's censorship powers derive from Section 51 (1) of the Constitution, which enables the Commonwealth to regulate trade and commerce under the Customs Act. Section 50 (1) of the latter Act provides that the Governor-General may, by regulation, prohibit the importation of goods into Australia. The Customs (Cinematograph Films) Regulations, which establish the Film Censorship Board and define its legislative role and functions, flow from that Section.

The Board is a full-time statutory body located in Sydney. Regional censorship officers, with limited powers and functions, are located in Canberra, Melbourne, Brisbane, Adelaide and Perth. The Board is administered by the Attorney-General's Department.

Under the Customs (Cinematograph Films) Regulations, the Board examines imported films and videotapes to determine whether to register or to refuse to register them for public exhibition. It also examines film advertising. The Regulations direct the Board not to pass films or advertising matter which in its opinion are

- blasphemous, indecent or obscene
- likely to be injurious to morality, or to encourage or incite to crime
- undesirable in the public interest.

The Board's State functions in relation to cinema films, including classification, are performed by virtue of formal agreements with the various States. Decisions on matters arising under the Regulations and on classification under State/Territory legislation may be appealed to the Films Board of Review.

Decision on all the above matters are determined by a majority vote.

*Feature Films.* In 1984, 620 feature films (including 31 Australian films) were processed. Twenty-one feature films were refused registration and deletions made in seven. There were 15 appeals, of which nine were upheld and six dismissed. Of the 620 features, 57 were classified For General Exhibition ("G"), 153 Not Recommended For Children ("NRC"—

since altered to "PG", Parental Guidance), 195 For Mature Audiences ("M") and 91 For Restricted Exhibition ("R"). Permissions to import for use at film festivals were granted to 103.

The principal suppliers were United States of America (235 films), Hong Kong (87 films), United Kingdom (61 films), France (47 films) and West Germany (21 films).

While the "M", "NRC" and "G" classifications are advisory, persons who have attained the age of two years and who have not attained the age of 18 years are excluded by law from seeing "R" rated films.

*Television Films.* In 1984, 11,092 items for use on television were processed, consisting of 2,939 sixteen mm films and 8,153 videotapes. The principal suppliers were United States (6,197 items) and the United Kingdom (2,226 items). Of the total, deletions were made in 45 items and 66 were classified "Not Suitable for Television".

*Videotapes.* The Board examined 5,173 films/videotapes for sale/hire in 1984. There were two appeals, both dismissed. Nine hundred and twenty-two titles were classified "G", 926 "PG", 1,176 "M", 711 "R" and 1385 "X". Fifty-three were refused classification.

*Advertising matter.* 3,179 items intended for use in the promotion of theatrical motion pictures were processed.

## **Professional Training**

### **Australian Film and Television School**

The Australian Film and Television School was established in 1973 as a Commonwealth statutory authority.

It is responsible for advanced film, television, radio, and audio-visual communications training throughout Australia. The School provides full-time, open and graduate courses.

The School undertakes, co-ordinates and disseminates research in connection with the production of programs and assesses training needs and employment opportunities in the industry it serves. It also maintains an extensive library collection of film, television, radio and other audio-visual reference topics.

A new building for the School is currently being constructed adjacent to the Macquarie University, Sydney.

### **National Institute of Dramatic Art**

The National Institute of Dramatic Art is Australia's national training school for young people who wish to enter the profession of theatre, film and television as actors, directors, designers or stage managers. The Institute's courses are designed to meet the needs of the entertainment industry by assisting students to develop craft skills, cultural background and personal discipline required for successful careers in their chosen field.

The Institute's student body numbers approximately 130 and it has a staff of 30 full and part-time teachers. Each year some 50 new students are enrolled from over 1,500 applicants from throughout Australia. In 1986, after 25 years of operating out of tin sheds and wooden huts, the Institute will move into a new home especially designed for its purpose. The building, located on the campus of the University of New South Wales is being funded by the Commonwealth Government, with additional funds coming from private sponsorship for the internal fixtures and equipment.

## **National Collections**

### **Australian Archives**

The need for a Commonwealth archival agency was recognised in 1943 when the Curtin Government appointed both the Commonwealth National Library and the Australian War Memorial as provisional archival authorities. In 1952, the Commonwealth National Library became the sole Commonwealth archival authority, and in 1961 the Archives Division of the Library was reconstituted as a separate agency known as the Commonwealth Archives Office. At this time, the Archives Office became responsible for the evaluation, disposal and preservation of Commonwealth records, for taking into custody all records no longer required for immediate reference and for regulating access to those records by research workers and other members of the public. In 1974, the Commonwealth Archives Office was renamed the Australian Archives and a Director-General was appointed in 1975. By 1974 Regional Offices had been established in all State capitals and in Darwin and Townsville. The Central Office of the Australian Archives is located in Canberra.



In October 1983, the Archives Act was passed and came into effect on 6 June 1984. The Act provides the Archives with a statutory basis for its operations and institutes arrangements for the management and proper disposition of the vast body of records created by all Commonwealth agencies, past and present.

By providing a legislatively based system of public access covering Commonwealth records more than 30 years old, the Archives Act complements the provisions of the Freedom of Information Act. Together these two Acts provide a comprehensive system of public access covering all classes of Commonwealth records.

In 1985 the Australian Archives implemented a national information program designed to advise all Commonwealth agencies of their responsibilities under the Archives Act and of the services which the Archives is required to provide.

Significant progress was made in 1985 in the development of an ADP facility within the Australian Archives. A computer centre was established at the Australian Capital Territory Regional Office at Mitchell and first phase communication lines and programs were installed, linking the central facility to five sites in the Australian Capital Territory and New South Wales.

The Australian Archives maintains liaison with similar organisations overseas, and is a national member of the International Council on Archives, established under the auspices of the United Nations Educational, Scientific and Cultural Organisation (UNESCO).

At 30 June 1985, Australian Archives' holdings throughout Australia totalled 379,920 shelf metres of records, including 155,850 metres of permanent value material. In the twelve months ending 30 June 1985, 2,746 official reference inquiries were received, 315,633 items were lent or returned to departments and 140,307 items were consulted by officials in the repositories. During the same period, 4,232 public reference inquiries were received and 25,947 items were consulted by the public in search rooms. As at 30 June 1985, Australian Archives had a staff of 386 full-time and 49 part-time officers.

#### **Australian National Gallery**

The Australian National Gallery in Canberra was established in 1975. The building was officially opened in 1982. The Gallery's aim is to acquire, conserve, research and make accessible a national collection of works of art for the benefit and enjoyment of all people. The gallery is responsible for the national collection of Australian art and representative works of international art. To fulfil this aim the Gallery's acquisitions follow two key principles: Works of art are selected on the highest aesthetic standards; and, in its international collections, the Gallery always seeks to complement existing public collections in Australia.

*Australian Art:* The entire upper floor of four galleries has a permanent display presenting the full history of Australian art. Spanning two hundred years, this unique display incorporates paintings and sculptures, decorative arts, illustrated books, prints, drawings, watercolours, photographs, mural decorations of monumental scale and Aboriginal art.

*International Art:* The Gallery began its collection of international art in 1972 and in a comparatively short period of time has acquired a range of masterpieces. They include Giambattista Tiepolo's *Marriage Allegory of the Cornaro Family*, Claude Monet's *Haystacks at Noon* and *Waterlilies*, Jean Batiste Houdon's *Bust of a Girl* and Joan Miro's *Landscape*.

#### **Australian War Memorial**

The Australian War Memorial commemorates Australian servicemen and women who died as a result of wars or warlike operations, from the Sudan (1885) to Vietnam. The Memorial building opened in Canberra in 1941.

The commemorative area includes the glass-mosaic Hall of Memory, Cloisters containing bronze panels of the Roll of Honour bearing 102,000 names, and the Courtyard in which there is a Pool of Reflection and a water cascade symbolising eternal life. The names of the 30 main theatres of war in which Australian forces served are inscribed around the Courtyard. The national Anzac Day and Remembrance Day services attended by the Governor-General are held at the Stone of Remembrance in front of the building. Other wreath-laying ceremonies are also conducted at the Commemoration Stone in the Courtyard.

As well as the nation's Memorial, it is also a significant museum and art gallery, containing some 40,000 war relics ranging from aircraft to commemorative badges, and 12,000 works of art by leading Australian artists, including Nolan, Dobell, Streeton and Lambert. The Memorial's 33 Victoria Crosses are the largest such single collection in the world.

A program of major renovations to the Memorial galleries has begun as part of the Bicentennial program. Photographs of the *Gallipoli Gallery* opened in 1984, are a feature of this issue. The War Memorial and its surrounds were entered in the Register of the National Estate in 1981.

The Memorial is a major tourist attraction, receiving 1.3 million visitors each year.

### **Museum of Australia**

The Museum of Australia was established under the *Museum of Australia Act 1980*. An 88 hectare site at Yarramundi on the shores of Lake Burley Griffin in Canberra has been reserved for the Museum.

The Museum will be Australia's first national museum of the history of the people who have inhabited the country from earliest times until today. The Museum is expected to open in 1990. A Visitor Centre will open at the site in 1986, and contain small exhibits which will provide an indication of the likely content of major exhibits in the Museum.

### **National Film and Sound Archive.**

The National Film and Sound Archive was established by Government from the former National Film Archive and Sound Recordings Section of the National Library of Australia. It is located in the former Institute of Anatomy building in Canberra. In its first year an independent Advisory Committee was commissioned to provide a comprehensive Report with recommendations on policy and programs for Australia's newest cultural institution. The Report will shape the Archive in its formative years.

The Archive exists to collect, preserve and make available moving images and recorded sound as national collections, which are recognised as the contemporary cultural heritage of Australia. Australia's long tradition of achievement in film, television, radio and recorded sound is reflected in a vast collection of media and complementary printed materials.

The Archive will act as a resource centre committed to documenting the careers and achievements of performing artists and other industry representatives. Scholars will be encouraged to use the Archive to produce definitive reference works. Its diverse collections will be available to specialists and the general public by providing technical services and public programs, such as museum exhibitions and film screenings.

### **National Library of Australia**

The National Library in Canberra was formally established under the *National Library Act 1960*, which came into effect in March 1961. It was previously part of the Commonwealth Parliamentary Library. The National Library maintains and develops a national collection of library material in all subject fields and from all countries. It is also responsible for assembling a comprehensive collection of library material relating to Australia and the Australian people. In fulfilling its functions, the Library seeks to preserve books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, music scores and other material. Under the deposit requirement of the *Copyright Act 1968*, a copy of all printed material published in Australia is delivered to the National Library.

The Library has also been enriched by the acquisition of such notable collections as the Petherick collection of Australiana in 1911, the Cook manuscripts in 1923, the Mathews ornithological collection in 1940, the Rex Nan Kivell collection of Australian and Pacific interest in 1959, the Ferguson collection of Australiana in 1970 and the Tooley collection of rare maps of Australasia and South East Asia in 1973. The Library regularly presents exhibitions of paintings, prints and other historical material selected from its various collections. Some of these are sent interstate for display.

The National Library's collection of Australian and overseas material contains almost 4 million volumes, including microforms; 38,500 paintings, drawings and prints; 440,500 photographs; 6,000 shelf metres of manuscripts; 340,000 maps; 550,700 aerial photographs; 112,460 music scores; 23,588 films and video cassettes and 13,800 oral history and folklore tapes.

These materials may be used in the Library's reading rooms and in some cases are also available through the national inter-library loan system, in which the Library is a major participant. The Library also provides reference services and access to computer based information services including the MEDLINE Network. The Library in co-operation with other institutions provides for the development and co-ordination of library services for the disabled. The Library operates a film lending service to organisations in Australia.

The provision of central cataloguing services by the National Library achieves cataloguing economies on a national scale. The Australian Bibliographic Network, a national on-line

shared cataloguing system launched by the Library in November 1981, now has 3,710,000 records. Bibliographic records for Australian and overseas books are made available from the Library, both as catalogue cards and in machine-readable form. Under its Cataloguing-in-Publication program, the Library supplies cataloguing data to Australian publishers in advance of publication so that this information may be printed in the book to which it belongs. In this way the book and its cataloguing data are available simultaneously to libraries, booksellers, bibliographers, and all others who need such data.

Co-operative bibliographical activity includes recording the holdings of the major Australian libraries in the National Union Catalogue of Australia, which is a series of specialised union catalogues for monographs, serials, newspapers, manuscripts, music, oriental language materials and library materials for the handicapped. The union catalogues are maintained in the National Library. At intervals they are published and progressively they are becoming available on-line. The series of catalogues is described in the *Guide to the National Union Catalogue of Australia*, 6th edition, 1985.

The Library is a partner with the State Library of N.S.W. in the Australian Joint Copying Project, which microfilms records relating to Australia, held in Great Britain and elsewhere.

A particularly important contribution to the National Library's role in the library community is its participation in two national consultative bodies. The Australian Advisory Council on Bibliographical Services is a co-operative association of libraries and other information agencies which seeks to encourage co-operation and the development of resources and services. The National Library provides the secretariat and meets the administrative costs of the Council's Standing Committee. The Director-General is the Library's representative on the Australian Libraries and Information Council which advises Commonwealth and State Ministers with responsibilities for the arts and cultural affairs on the nation-wide co-ordination of library and related information services.

#### **Other Libraries**

*Patent Office Library.* The library of the Australian Patent, Trademarks and Designs Office in Canberra contains approximately 12,000 books and a wide variety of periodicals and other literature relating to science, technology, industrial property (patents, trademarks and designs), law and practice. Patent specifications of inventions are received from the principal countries of the world and held in the Documentation Centre. Present holdings are over 15,000,000 with an estimated 600,000 patent specifications received annually. The Australian Patent Information Service works in co-operation with the Library. Its major function is to make Australian industry aware of the wealth of technological information held in the world collection of patent literature and assist them in accessing this information. Australian and some foreign specifications and related material are also available at sub-Offices in Brisbane, Sydney, Melbourne, Adelaide, Perth and Hobart. Information officers are located in the Sydney and Melbourne sub-Offices to assist the public to access patent literature.

*Commonwealth Scientific and Industrial Research Organization (CSIRO).* The Central Information, Library and Editorial Section (CILES) was formed at the end of 1973. Its objectives are to provide information, library, translation, editorial and publishing services in all fields of science and technology other than clinical medicine.

The Central Information Service complements the information programs of the 40 or so CSIRO Divisions and, in addition, produces numbers of data bases such as *CSIRO Index* and directories such as *Scientific and Technical Research Centres in Australia*. It also provides computer-based search services and a question-and-answer service. The Central Library is the co-ordinating centre for the CSIRO Library Network of some 70 libraries and book-holding centres providing acquisitions, bibliographic, reference and document support for the entire system. The Central Library maintains a union catalogue of the holdings of all CSIRO libraries and extensive collections of scientific and technical publications. The Editorial and Publications Service produces publications on behalf of the Divisions and, with the Australian Academy of Science, is responsible for publishing the Australian Journals of Scientific Research. The activities of the Section are fully reported in the regularly issued *CILES' Report*.

*The Australian War Memorial Documentary and Audio-visual Records Centre, Canberra.* The Centre preserves the documentary and pictorial records of Australia's participation in armed conflicts. Printed material includes over 80,000 volumes (books and bound periodicals); thousands of unbound periodicals; leaflets; souvenir and microfilm items; a large collection of military maps; newscuttings and newspapers; sound recordings; war posters;

postage stamps; and currency. Official records and personal papers occupy almost 2,000 metres of shelving. Official war photographs covering the 1914-18, 1939-45, Korean and Vietnam wars number over 670,000, and there are about 1.5 million metres of cinefilm. Facilities exist for reference and research.

*The Commonwealth Parliamentary Library.* The Library provides comprehensive information and research services to the Commonwealth Parliament through the Legislative Research Service and the Library, Reference and Information Service. The Research Service comprises groups staffed by subject specialists who prepare analyses and interpretations of specific issues with which the Parliament is or may be concerned. The Library, Reference and Information Service answers questions and provides information from printed and other published sources. The Library collection is concentrated on topical material, supported by a wide collection of standard references; it totals some 150,000 volumes, including 9,000 serial titles. The Library publishes the Commonwealth Parliamentary Handbook, which is a standard reference work, topical annotated reading lists, general research papers from the Legislative Research Service, digests of bills and, in alternate fortnights the Index to Current Information and Select List of Acquisitions. Extensive use is made of computer and on-line services, particularly in such areas as economic and electoral statistics and in the provision of information by librarians.

*Other Commonwealth Government libraries.* Current and retrospective information is available in Australia's special libraries. For a detailed listing of the libraries see the *Directory of Special Libraries in Australia*.

*Library services in the Territories.* The Northern Territory Library Service operates three public libraries in Darwin, and one each in Alice Springs, Katherine and Tennant Creek, and in co-operation with the Department of Education operates a community library in Nhulunbuy and Bamyili. On 15 September 1982, book stocks totalled 220,000 volumes, and 2,147 films were available in the film library. A country borrower programme is operated to service isolated areas.

The Department of Territories and Local Government conducts the Canberra Public Library Service for residents of the Australian Capital Territory.

#### **State Libraries**

Most municipal councils in the States have libraries funded largely by State governments. A detailed description of State libraries is given in each State Year Book.

#### **Children's Libraries and School Libraries**

Children's libraries exist in all States, usually as branches or extensions of State or municipal libraries.

#### **University and College Libraries**

The Commonwealth Government has since 1957 supported the development of university and college of advanced education libraries.

#### **International Expositions**

Responsibility for matters relating to Australia's membership of the Bureau of International Expositions (BIE) and Australia's participation in international expositions was transferred to the Department of Sport, Recreation and Tourism in December 1984. As a signatory to the convention relating to International Exhibitions, Australia is a member of the BIE which, under the convention, controls the frequency and determines the rules and regulations for expositions.

During 1985, Australia participated in the international exposition held from 17 March until 16 September in Tsukuba, Japan. The theme of the exposition was "Dwellings and Surroundings—Science and Technology for Man at Home". The exhibits in the Australian Pavilion projected Australia as an economically and technologically developed country with a multicultural society. Amongst the exhibits were the world's largest hologram and a unique "hands-on" sculpture by cartoonist and artist Bruce Petty and developments in ceramic art.

The Australian Pavilion was officially opened by the Australian Ambassador to Japan, Sir Neil Currie, on 15 March 1985. During the six months of the exposition some two million people visited the pavilion which was rated in the media reports as one of the two most visually inspiring of the foreign participants.

Australia is also to participate in Expo '86 to be held in Vancouver, Canada. The exposition has as its theme "World in Motion—World in Touch" and will be open from 2 May until 13 October 1986. The development of plans for Australia's participation is being

undertaken by the Australian Expositions Committee, chaired by Mr J. J. Kennedy, CBE, a prominent Queenslanders.

At the request of the Queensland Government, the Commonwealth, with the assistance of Queensland Government officials, obtained from the BIE the registration of a specialised exposition at Brisbane for 1988. Its theme is "Leisure in the Age of Technology" and it is to be held in the Bicentennial year from 30 April 1988 for six months.

A Ministerial Council for Expo '88 comprised of Commonwealth and Queensland Ministers and the Lord Mayor of Brisbane has been established to review arrangements for staging the exposition. In accordance with the international convention, the Commonwealth appointed, with the agreement of the Queensland Government, Sir Edward Williams KCMG, KBE, as Commissioner-General of the exposition.

Development and conduct of the exposition, which is to be staged on a site on the south bank of the Brisbane River adjacent to the central business district, is being undertaken by the Brisbane Exposition and South Bank Redevelopment Authority, a statutory body established by the Queensland Government.

## HERITAGE ACTIVITIES

The Commonwealth Government is an active partner with the States and Territories in protecting Australia's heritage, or national estate.

Under the *Australian Heritage Commission Act 1975*, the national estate is defined as "those places, being components of the natural environment of Australia or the cultural environment of Australia that have aesthetic, historic, scientific or social significance or other special value for future generations as well as for the present community".

Therefore Australia's heritage includes far more than historical buildings. It covers the natural and cultural environments in all their aspects. Natural environments range from national parks, nature reserves, habitats of endangered species, islands, rivers, wetlands, deserts and wilderness areas to outstanding geological features and landscapes. The cultural environment is equally diverse. Aboriginal sites of all types are included, from cave paintings to fish-traps and carved trees. Historic cultural places include old residential and commercial buildings, mining and industrial structures and their equipment, transport structures, shipwrecks, parks and gardens.

### National Estate Grants Program

The Program is designed to help the States and Territories, and organisations within them, to conserve our national estate. It is a Commonwealth Constitution 'Section 96' scheme operated under the provisions of the *Urban and Regional Development (Financial Assistance) Act 1974* and of agreements between the Commonwealth and each State and the Northern Territory.

The program is co-ordinated by the Department of Arts, Heritage and Environment in liaison with State and Territory authorities and the Australian Heritage Commission.

Under current arrangements, State and Territory governments have the primary responsibility for developing and administering their respective programs.

Project work is carried out by State and Territory government departments and authorities, local government bodies, academic institutions, National Trusts, professional and community organisations as well as by individual consultant firms working for them.

### Australian Heritage Commission

The Australian Heritage Commission's responsibilities are to advise the Minister for Arts, Heritage and Environment on all matters related to the National Estate; to prepare and maintain a Register of National Estate places; to develop policies and programs for education, research, professional training and public interest and understanding in fields related to the National Estate; and to administer any gifts and bequests made to the Commission.

The Commission, established under the *Australian Heritage Commission Act 1975*, consists of a part-time independent Chairman and up to six part-time Commissioners, with various skills and interests in the natural and cultural environment.

To date approximately 8,000 places have been entered in the Register of the National Estate. They relate to the natural environment and to Aboriginal or European culture.

### World Heritage List

The World Heritage List contains areas which are of "outstanding universal value", the disappearance or destruction of which would constitute a "harmful impoverishment of the

heritage of all nations of the world". There are five Australian entries on the World Heritage List: the Great Barrier Reef (Queensland), Kakadu National Park (Northern Territory), the Willandra Lakes Region (New South Wales), the Lord Howe Island Group, and the Western Tasmanian Wilderness National Parks.

### **Aboriginal Heritage and Culture**

On 25 June 1984, the *Aboriginal and Torres Strait Islander Heritage (Interim Protection) Act 1984* received Royal Assent. The Act provides protection for significant Aboriginal areas and objects under threat of injury or desecration. Applications are examined initially to see whether protection under State or Territory legislation is effective, and if this is the case a declaration will not be made. It is essentially emergency protection. The Act will lapse in June 1986.

### **Aboriginal Land Rights (Northern Territory) Act**

On Australia Day 1977, the *Aboriginal Land Rights (Northern Territory) Act 1976* was proclaimed. The Act gave legal recognition to Aboriginal land rights in the Northern Territory and was based on the recommendations contained in the second report of the Aboriginal Land Rights Commission (Woodward Report 1974).

In summary, the Act provides for:

- the creation of Aboriginal Land Trusts to hold title to Aboriginal land;
- the grant to Land Trusts of inalienable freehold title to Northern Territory Aboriginal reserves and some other land (about 19 per cent of the Northern Territory);
- Aboriginal Land Councils to act as agents for traditional Aboriginal owners in respect of land matters (currently the Central Land Council, Northern Land Council and Tiwi Land Council);
- an Aboriginal Land Commissioner to investigate and report on Aboriginal claims to unalienated Crown land and some other land made on the basis of traditional ownership. To date some 34 per cent of the Northern Territory has been successfully claimed while another 13 per cent under claim is yet to be decided;
- traditional Aboriginal owners to control mining and other activity on their land;
- negotiations by the Land Councils of terms and conditions of any mining or exploration to be carried out, and the appointment of an independent arbitrator if agreement cannot be reached in these negotiations;
- royalty equivalents from mining operations on Aboriginal land to be received by Aboriginals with a proportion (30 per cent) being paid to communities within the area affected, a proportion going to meet the general administration costs of the Land Councils (40 per cent) and the balance being available for the benefit of Aboriginals in the Territory (30 per cent).

### **Uluru (Ayers Rock-Mount Olga) National Park (NT)**

On 26 October 1985 the Governor-General signed documents granting freehold title to Uluru (Ayers Rock-Mount Olga) National Park to an Aboriginal land trust representing the traditional Aboriginal owners. In accordance with the agreement leading to the grant, the traditional owners leased back the land to the Director of the Australian National Parks and Wildlife Service who will maintain it as a National Park. A Board with an Aboriginal majority has been established which, in conjunction with the Director, oversees the management of the park and the preparation of plans of management.

### **National Trusts**

The National Trust bodies were set up to further the conservation of lands, buildings, works and articles which are of heritage importance because of educational, aesthetic, historic, architectural, artistic, scientific, cultural or other special interests.

The first Trust, the National Trust of Australia (New South Wales), was formed in 1945. Since then, Trusts have been formed in each State, the Northern Territory and the Australian Capital Territory.

Membership of the National Trusts is open to all individuals and organisations. Total membership throughout Australia is approximately 80,000.

About 300 properties are owned or controlled by the Trusts. These properties include houses, nature reserves, gardens, two paddle steamers and an iron barque, an historic hamlet, and buildings which were formerly a telegraph station, a stock exchange, a powder magazine, a market, an inn, a police station, a court house, a gaol and a joss house.

The various Trusts have established heritage registers which collectively list more than 18,000 places throughout Australia including buildings, urban areas, landscapes and industrial sites.

### Historic Shipwrecks

Around Australia's coastline lie many old shipwrecks of historic value—the English *Trial Trawl* sunk in 1622; the Dutch *Batavia* wrecked in 1629; *HMS Sirius*, the flagship of the Fleet of settlement lost in 1790; the Bounty mutineer chaser *HMS Pandora* wrecked '91; sailing ships, whalers, cutters and steamships of all times and nationalities.

Shipwrecks in their hundreds provide direct evidence of the exploration of Australia, of the first industries such as sealing, whaling and trading and of the perils facing convicts and migrants who voyaged to Australia. These survivals of international maritime heritage are worthy of protection, conservation and proper study. Their important educational, recreational and tourist applications are recognised and protected by the Commonwealth *Historic Shipwrecks Act 1976* which applies to the coastal waters off all Australian States and Territories. Under this Act, any person finding the remains or relics of a previously unreported ship must notify its location to the Commonwealth Minister for Arts, Heritage and Environment. If the wreck is declared 'historic', the Minister is empowered to pay the finder a reward not exceeding the prescribed amount of \$50,000.

## Australian Anniversaries

### The Australian Bicentenary—1988

The Commonwealth Government has committed \$166 million (July 1982 prices) for the development of projects and events to celebrate and commemorate the Australian Bicentennial Year in 1988.

In April 1979 the Commonwealth established the Australian Bicentennial Authority (ABA) to develop, promote and implement a National Program of Projects and Events. The *Australian Bicentennial Authority Act 1980* established the ABA as a company, limited by guarantee. The ABA is governed by a Board of Directors appointed by the Commonwealth, the Prime Minister and the Leader of the Opposition, the States and the Northern Territory.

The ABA's national program of projects and events was announced on 23 July 1984. This program sets the framework for national Bicentennial projects and events and comprises activities in five general areas:

- Commemorative projects other than the Commonwealth/State commemorative program
- Education and information activities
- Community based activities
- Arts and entertainment activities
- Major events

Special consideration will be given to developing programs for disadvantaged people and special interest groups—Aboriginal programs, women's projects, a youth festival, multicultural events and projects involving the aged and the disabled. In announcing the national program, the Minister confirmed that 'Living Together' is the official theme for the Bicentenary.

Of the \$166 million commitment for the Bicentenary, \$48 million was set aside for the Commonwealth/State Bicentennial commemorative program. The States and Territories have agreed to at least match their share of the Commonwealth funding under this program to provide lasting memorials for the Bicentenary, to be in place by the end of 1988. New South Wales, Queensland and Victoria have already nominated major projects under this program and the other States and Territories are expected to follow suit in the near future.

Commonwealth Departments and Statutory Authorities are also involved in developing their own Bicentennial projects. Although these projects are in the early stages of development, a number of exciting proposals are expected, including the development of documentaries and dramas depicting our development, major art exhibitions and so on.

The Commonwealth has registered with the Bureau of International Expositions an exposition to be held in the year of the Bicentenary, 1988, in Brisbane. Expo 88 is primarily a Queensland Government initiative. It will have the theme, 'Leisure in the Age of Technology'.

An article, 'Australia Prepares for its Bicentenary', appears at the end of this Chapter.

### Australia Day

The Commonwealth established the National Australia Day Council in October 1984 to expand and continue the work of the National Australia Day Committee whose membership had expired. For the 1985-86 financial year the Commonwealth Government has allocated \$750,000 to cover the operation of the National Australia Day Council.

The Council has the role of promoting and encouraging national pride and unity and coordinating the celebration of Australia Day. Membership of the Council includes a President



An artist's impression of the canopies which will cover Australia's World Expo 88 site in Brisbane.

*Australian Information Service*

and four members appointed by the Commonwealth; one representative of each State and Territory nominated by the State or Territory Government concerned; and a representative of the Australia Bicentennial Authority.

The celebration of Australia Day 1985 included more events, involved more participants and secured more support than in previous years. The continued trend towards bigger and better Australia Day celebrations has been evident since 1980 and the growing public interest in our national day shows no signs of abating. The decision to upgrade the Government's support for Australia Day was taken directly as a result of the high level of community interest in the celebrations.

A major issue related to Australia Day was again the question of the most appropriate arrangements for the public holiday. Correspondence and media comment continued to indicate public support for changing the holiday to 26 January each year rather than the following Monday as is now the case. An official survey conducted by the National Australia Day Council immediately after Australia Day 1985 showed that 47 per cent of Australians over 18 years of age were in favour of the change. This compares with only 31 per cent in 1980.

#### **South Australia's Sesquicentenary 1986**

The South Australian 150th Jubilee celebrations are planned for 1986 and the Commonwealth has contributed \$2 million to help in making the sesquicentenary a success. The Commonwealth's gift will assist with Jubilee projects such as the purchase of the 64 year-old sailing ship the 'Falie', which will provide a focus for Jubilee events as she calls into South Australia ports in 1986; the South Australian Maritime Museum at Port Adelaide; the further restoration of Burra as a Heritage Town; and the redevelopment of Fort Glanville to relate the story of South Australia's colonial defences from 1836-1900.



## ENVIRONMENT AND CONSERVATION

In Commonwealth legislation, environment is defined as including "all aspects of the surroundings of man, whether affecting him as an individual or in his social groupings". Thus the environmental responsibilities of the Government relate to a broad range of activities including control of air and water pollution, soil conservation, wildlife protection, establishment of national parks, recycling and energy conservation. These responsibilities are shared among many agencies of government although a special focus is provided by the Ministry of Arts, Heritage and Environment.

The Commonwealth is responsible for the environment of the Territories and in Commonwealth places, for the environmental impacts of its agencies operating in the States and for contributing to international environmental activities, including the application of international conventions to which Australia is a signatory. The Commonwealth also plays a major role in environmental research, environmental education and information exchange and generally endeavours to co-ordinate environmental protection and conservation activities to achieve maximum benefit for the nation.

### National Activities

National collaboration on environmental matters is facilitated through Commonwealth and State Ministerial Councils and other advisory bodies, and through a variety of nationally co-ordinated activities and programs.

### Australian Environment Council

The Australian Environment Council was established in 1972 by agreement between the Prime Minister and the State Premiers. Membership consists of Ministers responsible for environmental matters in each State, internal Territory and the Commonwealth Government. New Zealand and Papua New Guinea have observer status on the Council.

The Council provides a forum for consultation, co-operation and liaison on matters concerning environmental management and pollution control. These matters have included the control of emissions and noise from motor vehicles, the use and disposal of hazardous chemicals, noise control, water quality, air pollution, solid-waste management, the economics of pollution abatement policies and environmental impact assessment.

### Council of Nature Conservation Ministers

The Council of Nature Conservation Ministers was established in 1974 by agreement between the Prime Minister and State Premiers. It comprises Ministers with nature conservation responsibilities in each State, internal Territory and the Commonwealth Government as well as the Commonwealth Minister responsible for the Commonwealth Scientific and Industrial Research Organisation. New Zealand and Papua New Guinea have observer status on the Council.

The Council provides a forum for consultation, cooperation and liaison on matters relating to the conservation and management of Australia's flora and fauna. Specific matters considered by the Council have included trafficking in native animals and plants, culling of populations of native species, protection of endangered and threatened plants and animals, the control of diseases affecting or likely to affect natural ecosystems in Australia, ranger training, management of national parks, and identification of wilderness areas.

### Australian Ionising Radiation Advisory Council

The Australian Ionising Radiation Advisory Council advises the Government on matters such as fallout over Australia from nuclear weapons testing, health effects of exposure to ionising radiation, radioactive waste management, visits of nuclear powered warships, and licensing and regulation of nuclear activities.

### National Conservation Strategy for Australia

Following the international launching of the World Conservation Strategy in 1980, the Commonwealth Government, all States and the Northern Territory agreed to co-operate in developing a National Conservation Strategy for Australia which would aim to achieve "sustainable development"—that is, harmony between development and conservation of Australia's living resources and supporting ecosystems. After wide consultation with the States, non-government conservation groups, industry and the community, consensus was obtained on a Strategy at a National Conference held in June 1983.

The Commonwealth Government endorsed the National Conservation Strategy for Australia in June 1984 and has established an Interim Consultative Committee to advise on its

implementation. The Northern Territory and most State Governments have also endorsed the Strategy.

### **National Tree Program**

The National Tree Program aims to conserve and establish trees and associated vegetation for community and private benefit throughout Australia. The objectives of the program are to increase selectively rural tree cover, promote co-ordinated action by individuals, governments and the community generally to conserve, plant and regenerate trees and to develop public awareness of the value of trees.

Major links have been established with the Community Employment Program to enable implementation of revegetation projects, particularly in rural areas.

### **Australian Biological Resources Study**

The Australian Biological Resources Study (ABRS) was established in 1973 to stimulate taxonomic and ecological studies of Australian flora and fauna through provision of grants for research and publication. ABRS responsibilities include provision of advice on national taxonomic collections and establishment and maintenance of a national taxonomic data bank. Much of the work of the study is done in State Museums, Botanic Gardens and Herbaria which were established during the last century. CSIRO also carries out important research relating to flora and fauna.

Current major projects of ABRS include preparation of a 60 volume *Flora of Australia*, a 10 volume *Fauna of Australia*, compilation of a 70 volume *Zoological Catalogue of Australia* and establishment of data base exchange systems for Museums and Herbaria for biogeographic and taxonomic information.

### **Environment Studies**

The Department of Arts, Heritage and Environment undertakes studies in relation to the economics of pollution control, conserving and managing natural resources, cost-benefit analysis in support of environmental impact assessments, and the analysis of environment and energy systems. Statistical reports on various aspects of the Australian environment and a major report on the state of the Australian environment have been published.

### **INFOTERRA**

The Department of Arts, Heritage and Environment is the Australian National Focal Point for INFOTERRA. INFOTERRA is an international information network, developed by the United Nations Environment Programme, to assist organisations and individuals in locating the sources of environmental information. The Department is also the INFOTERRA Regional Service Centre for South East Asia and the South Pacific. Its function is to assist countries in the region and improve their environmental information capability and service.

### **Control of Environmental Contaminants**

Various programs operate to control environmental contaminants. Final plans are being made for a national chemicals notification and assessment scheme. The Environmental Protection (Sea Dumping) Act controls dumping of wastes in marine waters. The capacity for monitoring air pollution is being strengthened through a national monitoring program being implemented in conjunction with the States. Other activities cover codes of practice for radioactive materials, waste management, monitoring of the marine environment, oil spill control and air pollution control strategies.

### **Statutory Authorities**

*Australian National Parks and Wildlife Service (ANPWS)*. ANPWS is the principal adviser to the Commonwealth Government on national nature conservation and wildlife policies. It works in close co-operation with other Commonwealth Authorities and relevant State and Territory Agencies. Responsibilities include nature conservation, national park planning and management, protection of cetaceans, creation of public awareness and involvement in conservation, preservation of the Australian national heritage and co-operation with Aborigines in protecting wildlife and natural features.

*Great Barrier Reef Marine Park Authority*. This Authority was established by the *Great Barrier Reef Marine Park Act 1975* which provides for the establishment, control, care and development of a marine park in the Great Barrier Reef Region. 98.5 per cent of the Region has been declared a Marine Park and the Authority works closely with the Queensland Government in its management. The main management strategy is "zoning". The purpose of zoning plans is to separate potentially conflicting activities while allowing all reasonable uses

and ensuring the long-term conservation of the Reef ecosystems. Zoning Plans are in operation for the Capricornia, Cairns and Cormorant Pass Sections of the Park and are being developed for the Far Northern, Central and Capricorn Sections in that order. Involvement of the general public is encouraged by public participation programs at two stages in the development of each zoning plan.

*Supervising Scientist for the Alligator River Region.* Special arrangements have been made for minimising the environmental impact of uranium developments in the Northern Territory. The Commonwealth has appointed a Supervising Scientist who has overall responsibility to protect and restore the environment of the Alligator Rivers Region in areas affected by uranium mining.

## NATIONAL PARKS, BOTANIC GARDENS AND NATURE RESERVES

### National Parks

#### **Namadgi National Park—Australian Capital Territory**

In June 1984 the former Gudgenby Nature Reserve (62,000 ha.) and part of the Cotter River Catchment (32,000 ha.) were combined to form a new National Park. It is known as Namadgi and covers 40 per cent of the Australian Capital Territory. Namadgi shares a common boundary with the magnificent Kosciusko National Park (520,000 ha.) and other Reserves in neighbouring New South Wales.

The topography and landscapes of Namadgi National Park and, consequently, the plant and animal communities are extremely varied and include the only parts of the A.C.T. with a sub-alpine climate. Habitat ranges from grassland of the valley floors, through woodland and mountain forest to sphagnum bogs, heath swamps and alpine woodland.

Several high peaks rise to over 1,800 metres above sea level and include Mount Bimberi, the highest peak in the A.C.T.

#### **Kakadu National Park—Northern Territory**

The Park covers an area of 13,073 square kilometres in the Alligator Rivers Region approximately 200 kilometres east of Darwin. The first management plan for Kakadu National Park, which came into operation on 2 April 1981, ceased to have effect on 31 December 1985. Extensive public participation in the preparation of a new management plan has been completed and the new plan will come into operation after it has lain before both Houses of Parliament for twenty sitting days. Substantial achievements have been made in the management of the Park. Control of the feral water buffalo population has led to dramatic improvement in the condition of floodplain and wetland areas with consequent benefits to wildlife. Visitor facilities and access have been greatly improved with the development of three major camping areas and several less-formal camping areas, the construction of sealed roads to key features, and installation of facilities for the protection and interpretation of the renowned art sites of Ubirr (Obiri) and Nourlangie Rock. An estimated 80,000 persons visited the Park in 1984-85.

#### **Uluru (Ayers Rock-Mount Olga) National Park—Northern Territory**

The Park covers an area of 132,566 hectares and is located approximately 300 kilometres south-west of Alice Springs. Current administrative arrangements for the park are dealt with under Heritage Activities in this Chapter. The new board and director are preparing a new plan of management for the park to replace the first plan which, unless sooner replaced, ceases to have effect on 30 April 1987. An estimated 110,000 persons visited the Park in 1984-85.

### Botanic Gardens

#### **Australian National Botanic Gardens**

**Australian Capital Territory:** The Australian National Botanic Gardens occupy a 44 hectare site on the lower slopes of Black Mountain in Canberra. It was officially opened in 1970 and comprises the largest living collection of Australian native plants with over 6,000 species in cultivation. The associated herbarium houses over 167,000 specimens. An annexe of approximately 78 hectares was established at Jervis Bay in 1951 to cultivate frost tender plants under more favourable conditions than those prevailing in Canberra, and to establish a collection of native plants representative of the flora of the Jervis Bay region.

A Visitor Information Centre, educational facilities and classrooms, and the Banksia Centre with its special garden and activity programs for disabled people are part of the community services offered by the Gardens.

Horticultural, botanical and biological research is an important aspect of the Gardens' activities and special emphasis is placed on the study and cultivation of endangered species. The Australian Cultivar Registration Authority is also based at the Gardens.

A 40.5 hectare extension to the Gardens adjacent to the present site will be developed over the next 10 years to enable a greater number of species to be cultivated.

### **Darwin Botanic Gardens**

**Northern Territory:** The Darwin Botanic Gardens occupy 30 hectares and feature 12 hectares of tropical plants of both native and overseas origin. Two hectares are used for an amphitheatre and contain a number of native and exotic plants. The Gardens are controlled by the Darwin City Council who have recently commenced a \$600,000 redevelopment program which will include a rain forest, a typical top-end lagoon and a coastal salt-water development.

## **Nature Reserves (A.C.T.)**

### **Tidbinbilla Nature Reserve**

The Tidbinbilla Nature Reserve (5,515 ha.) is located 43 km south-west of Canberra. The Reserve includes much of the Tidbinbilla Valley which ranges from 762 metres above sea level to 1,561 metres at Tidbinbilla Peak, the highest peak of the Tidbinbilla Range which forms the western boundary of the Reserve. As a consequence of the valley topography many habitats are represented and plant and animal wildlife is diverse. A system of wildlife enclosures and waterfowl ponds, 56 kilometres of nature trails and a comprehensive information service is provided for approximately 180,000 visitors per annum.

### **Black Mountain Reserve**

The Black Mountain Reserve (521 ha.) adjacent to Lake Burley Griffin, is a significant focal point in the Canberra landscape and an essential component of the 'mountain and lake' concept of the Canberra scene. Black Mountain Reserve is unique in its setting within the inner boundary of a National Capital. In addition to broad scale scenic attributes, the Reserve has a varied complex of flora and fauna and is used extensively for recreation and nature study.

### **Jervis Bay Nature Reserve**

The Jervis Bay Nature Reserve occupies two thirds (4,470 ha.) of the Commonwealth Territory of Jervis Bay which lies on the south-east coast of Australia. The Reserve is characterised by a substantially natural landscape and outstanding coastal scenery, high cliffs, ocean and bay beaches, sand dunes, woodland, forest and heath. A small island and part of the unspoilt marine environment of Jervis Bay and its foreshores are managed in sympathy with the Nature Reserve. Camping facilities are provided and are designed to complement the natural values of the area which attracts about 400,000 visitors annually.

Management aims for all nature reserves in the A.C.T. and Territory of Jervis Bay are to:

- maintain natural ecosystems and landscapes and protect sites of prehistoric and historic significance;
- provide opportunities for recreational, scientific and educational use of these resources consistent with their protection.

## **SPORT AND RECREATION**

The Department of Sport, Recreation and Tourism has a general responsibility in the national sphere for recreation, fitness and advice on sports policy.

All State governments have also established agencies with special responsibilities for recreation and sport. Increasing numbers of local government authorities are employing recreation workers who are responsible for planning the use of recreation facilities, and for devising recreation programs.

### **Development and Assistance**

In 1985-86 funds will be provided to assist in increasing opportunities for participation in recreation through the Recreation Development Program. \$294,296 were expended in 1984-85.

**Life. Be In It**

The Commonwealth continued its financial support to "Life. Be In It", with a grant of \$75,000 during 1985-86 to support specific national projects and activities which were in accord with the Government's commitment to improve the sport and recreational opportunities of all Australians.

**Fitness of Australian Youth**

In February 1984 the Commonwealth Government made a grant of \$27,000 to the Australian Council for Health, Physical Education and Recreation (ACHPER) to support the development of strategies for implementation of a national survey of the fitness, health and physical performance of Australian school children during 1985. In September 1984 the Commonwealth approved a grant of \$300,000 to ACHPER, to be paid over the 1984-85 and 1985-86 financial years, to support the conduct of the survey. The survey will provide important data on the health and fitness of young Australians and will provide a benchmark against which the effectiveness of health and fitness programs can be measured.

**Employee Fitness Programs**

Funding was made available in 1984-85 for a range of projects associated with encouraging the adoption of fitness, health and lifestyle programs at the workplace. These included a study of the economic impact of low back pain and the role and effect of appropriate physical activity; the conduct of a grants program for innovative employee fitness and recreation projects; and the completion of a videotape promotion on employee fitness programs for small businesses.

**Australian Institute of Sport**

The Australian Institute of Sport (AIS) was established in 1980 as a private company limited by guarantee, incorporated in the A.C.T. to provide Australia's top level athletes with the opportunity to develop their sporting potential through first class coaching in international standard sports facilities and with access to sports science and sports medicine support.

In 1985-86 scholarships were provided to 275 top sports people in 13 sports—basketball, diving, gymnastics, hockey, netball, rowing, soccer, squash, swimming, tennis, track and field, water polo and weightlifting. Sportsmen and sportswomen attending the Institute are also able to undertake secondary or tertiary education or obtain regular employment.

The AIS Board of Management, appointed by the Minister responsible for sport, develops the Institute's development policy and priorities. At the end of June 1985, the AIS had a staff of 142, comprising 79 administrative staff, 42 sports coaches and 21 sports science/sports medicine personnel. The Institute's headquarters are located at Bruce in the A.C.T. Decentralised units have been established in Perth to cater for hockey and Brisbane for squash and diving.

In 1985-86 the Government provided \$13.9 million to cover the operational, development and facility management costs of the Institute. In addition to the resident sports program, the Institute administers the National Training Centre Program, which gives all sports an opportunity to use the AIS facilities, resources and expertise for national selection trials, team training, talent development programs, coaches' seminars and workshops for sports officials. Overseas athletes and coaches regularly visit the Institute.

**National Sports Facilities Program**

During the period 1984-85 to 1986-87 the Commonwealth will spend \$32.8 million on the construction of international standard sports facilities under the National Sports Facilities Program.

The aim of the program is to encourage and assist States and Territories to construct a range of sporting facilities to give Australian athletes the opportunity to train and compete on a similar basis to their overseas counterparts and enable Australia to be more successful in attracting international competition. Funds available under the program are provided on a dollar for dollar basis for those facilities which have been accorded the highest priority in the various States and Territories.

**Australia Games**

The inaugural Australia Games were conducted in Melbourne from 26 January to 5 February 1985 to coincide with Victoria's sesquicentenary. Highlights of these Games included:

- the attendance of over 1,600 participants, including 804 overseas athletes from 30 countries;

- capacity crowds at the opening ceremony, basketball, netball, gymnastics, aquatics and surf lifesaving;
- all four aquatic sports appearing on the one program for the first time at a national level;
- the integration of disabled competition into the track and field, swimming, basketball, netball, lawn bowls and weightlifting programs; and
- the provision of international competition for Australia's developing and elite athletes in their own environment.

The impact and success of the Games were further highlighted by a post event awareness survey and an economic impact analysis of the Games. The Victorian Government has estimated that the economic impact of the Australia Games on the Victorian economy, taking into account the direct and indirect income effects of tourist expenditure was \$18.1 million (December 1984 costs) excluding day trip expenditure.

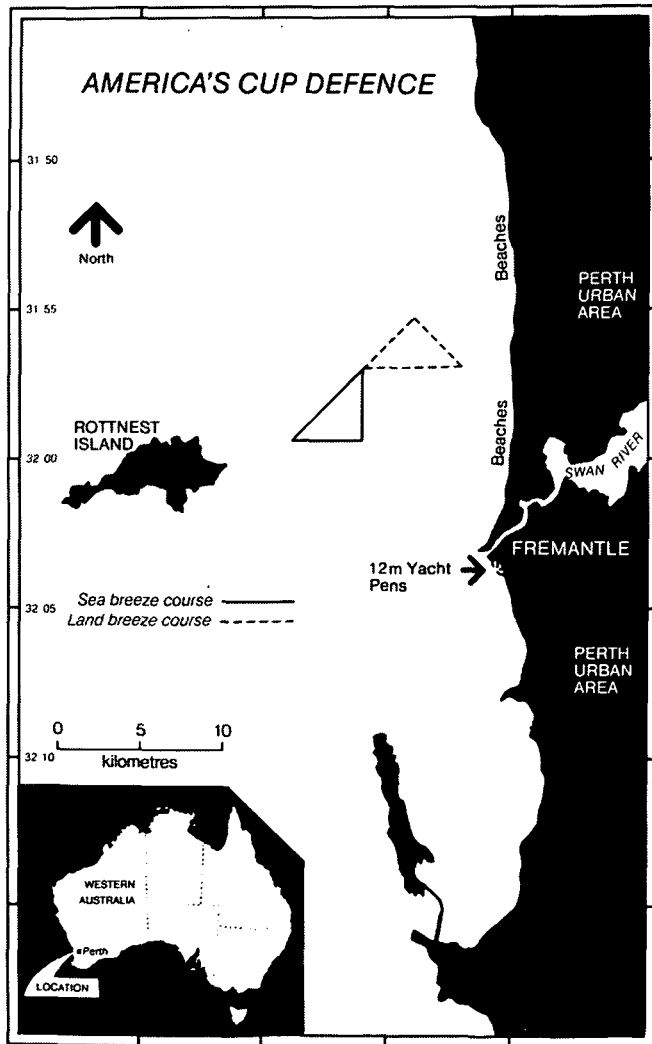


Diagram of the courses chosen for the America's Cup 12 metre yachting final to be sailed off Perth, W.A. starting on 31 January 1987.

#### Fourth World Cup in Athletics

The highlight of the 1985 international athletics program, World Cup IV, was held in Canberra from 4-6 October 1985. This was the first time that this prestigious competition had been held in the Southern Hemisphere. Previous World Cups were held in Dusseldorf (1977), Montreal (1979) and Rome (1981).

The World Cup is an intercontinental teams competition. Europe, Africa, Asia, the Americas (Canada, the Caribbean, South America) and Oceania (Australia, New Zealand, Pacific Islands, Papua New Guinea) were represented and competed with teams from the U.S.A. and the first and second placed national teams from the European Cup competition held in Moscow in August 1985. In 1985 these were the Soviet Union and the German Democratic Republic (G.D.R.) respectively.

The event was held at the National Athletic Stadium in the Canberra suburb of Bruce. Facilities located nearby at the Australian Institute of Sport and the Canberra College of Advanced Education were used as the operational headquarters and to house the visiting athletes.

The 1985 World Cup team competitions were won by the U.S.A. (men) and the G.D.R. (women). World records were established by Marita Koch in the women's 400 m and the G.D.R. women's 4 x 100 m relay.

The Commonwealth Government contributed \$300,000 towards operational expenses of World Cup IV (\$150,000 each from the Departments of Territories and Sport, Recreation and Tourism). In addition, the upgrading of facilities for the event, including the construction of a warm up track, a new scoreboard and additional seating, was undertaken by the National Capital Development Commission at a cost of \$5.4 million.

#### Sport and Recreation for the Disabled

The National Committee on Sport and Recreation for the Disabled (NCSRDP) was established in 1981 to advise the Minister on matters relating to the development of sport and recreation for disabled people. Its primary function is to make recommendations to the Minister for Sport, Recreation and Tourism on:

- priority areas for the development of sport and recreation for disabled people; and
- allocation of funds provided to assist sport and recreation for disabled people.

The Department of Sport, Recreation and Tourism administers the Program of Assistance for Sport and Recreation for Disabled People (PASRDP) based on advice from the NCSRDP. The program has the aim of assisting disabled organisations and providing sport and recreation opportunities for disabled people.

In 1984-85, \$700,000 was allocated to the Program. A total of \$549,756 was granted to various sport, recreation and community organisations involved in the provision of sport and recreation facilities and programs for disabled people, and in research associated with the participation of disabled people in sport and recreation activities.

The following table outlines the allocation of Program grants by category in 1984-85:

GRANTS TO PASRDP 1984-85			
	<i>Sport</i>	<i>Recreation</i>	<i>Total</i>
	\$	\$	\$
Administration—			
General . . . . .	34,840	7,800	42,640
Personnel . . . . .	96,644	78,480	175,124
National Championships . . . . .	41,810	-	41,810
International Travel—			
Competition . . . . .	114,220	-	114,220
Meetings . . . . .	18,799	-	18,799
Research Projects . . . . .	4,615	27,903	32,518
Recreation Demonstration Projects . . . . .	-	124,645	124,645
<b>Total . . . . .</b>	<b>310,928</b>	<b>238,828</b>	<b>549,756</b>

Two new programs designed to assist disabled sportspeople were implemented in 1984-85. They were the National Disabled Athlete Award Scheme (NDAAS) and the Elite Disabled Athlete Assessment Centre Program (EDAACP).

The NDAAS objective is to encourage high performance disabled athletes to continue their involvement in sport and maintain or improve performance levels. The scheme provides direct financial assistance to individuals to defray costs associated with competition, training and travel. \$50,000 was allocated to NDAAS in 1984-85, and in 1985 grants were awarded to 13 disabled athletes.

The EDAACP has been established as a 3 year pilot evaluation study. The Program is designed to offer disabled athletes access to physiological and psychological assessment facilities, as well as to provide high level disability specific coaching advice. The Program was allocated \$100,000 in 1984-85.

### **Australian Sports Commission**

The Australian Sports Commission was established on 1 July 1985 as a statutory authority, with the aim of providing leadership and long term direction for the future development of sport in Australia. A principal objective will be to assure continuity and stability of sports development by ensuring the most equitable distribution of the government's sports dollar.

In 1985-86 the Government provided \$8.6 million for the Commission's program and administrative expenses. Included in the Budget for 1985-86 is \$7 million for the Sports Development Program. The objectives of the Australian Sports Commission reflect directly the reasons for the establishment of the Commission which are:

- to maximise funding for sport from the private sector to supplement funds from the Commonwealth Budget;
- to provide leadership in the development of Australia's performance in international sport;
- to increase the level of participation in sport by all Australians.

It is the overriding aim of the Commission to make a significant contribution to the development of Australian sport at all levels not only as a flexible, innovative partner in the community of sport but also by providing a focus to achieve a greater degree of co-ordination within that community to ensure that available financial resources, expertise and experience are used to maximum effect.

In order to achieve its objectives, the ASC will be responsible for a range of specific functions:

- to advise the Minister in relation to the promotion and development of sport;
- to raise money through the Australian Sports Aid Foundation for the purposes of the Commission;
- to administer and spend money from the Budget or raised by the Sports Aid Foundation, for the purposes of the Commission;
- to co-ordinate activities in Australia for the promotion and development of sport;
- to consult and co-operate with appropriate authorities of the Commonwealth, of the States and of the Territories, and with other organisations, associations and persons, on matters related to its activities;
- to initiate, encourage and facilitate research and development in relation to sport;
- to collect and distribute information and provide advice, on matters related to its activities.

#### **Programs**

When it was established the Commission assumed responsibility for a number of programs that had been administered up to then by the Federal Department of Sport, Recreation and Tourism.

Although they are discrete programs, they are all funded under the "umbrella" of the Sports Development Program.

#### **Sports Development Program**

The Program provides financial assistance to national sporting associations. These include national directors and coaching directors, contributions to international competition, administrative support and development projects.

#### **Sports Talent Encouragement Plan**

The Scheme provides direct financial assistance to world ranked Australian individual athletes and teams and to athletes demonstrating a capacity to achieve world rankings. The assistance contributes towards the costs of training and competition. The Scheme was formerly called the National Athlete Award Scheme.

#### **Sports Science Research Program**

The Commission provides funds under the innovative Sports Science Research Program which enables national organisations to utilise tertiary institutions to carry out research related to their sport. Closely related to this is the employment of a Sport Research Co-ordinator, who assists sports in obtaining information and research for the development of their sport. This position is funded by the ASC.



### Drugs in Sport

Funds have been provided to the Australian Sport Medicine Federation for the work of the Drugs in Sports Committee. This has enabled the employment of a full-time co-ordinator and the preparation of educational material.

### Australian Coaching Council

The Commission funds the position of Coaching Development Officer responsible for the National Coaching Accreditation Scheme and for the development of resource materials. The position reports directly to the Coaching Council, which is serviced by the Commission.

## TRAVEL AND TOURISM

The following pages contain statistics of travel to and from Australia, travel by Australian residents within Australia, and tourism, together with some descriptive matter.

### Overseas travel

Statistics about travellers to and from Australia are classified in the first instance by the actual or intended length of stay in Australia or abroad; this classification distinguishes between long-term and short-term movement.

Statistics of permanent and long-term movement are shown in Chapter 6, Demography.

Statistics of short-term arrivals and departures which are in the nature of travel statistics are given below.

*Short-term movement* is defined as comprising visitor arrivals and Australian resident departures where the intention of staying in Australia or abroad is for a period of less than twelve months, together with departures of visitors and returns of Australian residents who have stayed in Australia or abroad for less than twelve months.

*Short-term movement* excludes persons who arrive in and depart from Australia on the same ship's voyage or on the same flight (variously called direct transit or 'through' passengers) or who change flights without leaving the airport's transit area; passengers on pleasure cruises commencing and finishing in Australia; and all crew. However, it includes persons who pass through the Customs Barrier and declare the purpose of their visit to Australia to be 'in transit'. Short-term visitors are more numerous than long-term visitors and have come to be regarded as 'tourists' by many users of the statistics.

SUMMARY OF SHORT-TERM TRAVELLER STATISTICS

	<i>Overseas visitors</i>		<i>Australian residents</i>	
	<i>Arrivals in Australia</i>	<i>Departures from Australia</i>	<i>Departures from Australia</i>	<i>Arrivals in Australia</i>
Annual average—				
1966-70 . . . . .	297,300	308,300	258,800	259,700
1971-75 . . . . .	475,900	479,000	647,600	631,400
1976-80 . . . . .	684,700	655,400	1,077,300	1,062,100
Year—				
1979 . . . . .	793,300	752,400	1,175,800	1,144,300
1980 . . . . .	904,600	874,100	1,203,600	1,194,800
1981 . . . . .	936,700	900,400	1,217,300	1,181,400
1982 . . . . .	954,700	921,500	1,286,900	1,259,600
1983 . . . . .	943,900	928,900	1,253,000	1,219,700
1984 . . . . .	1,015,100	985,800	1,418,600	1,374,700

In addition to the basic classification of travellers shown above, certain other characteristics are ascertained. These characteristics are: sex, age, marital status, country of citizenship, country of birth, occupation, intended or actual length of stay, purpose of journey, mode of transport, country of residence or where most time was or will be spent, country of embarkation or disembarkation, State of residence or where most time was or will be spent, and State of embarkation or disembarkation.

The categories shown in the previous table are cross-classified by various characteristics listed above and resulting statistics are shown in considerable detail in quarterly and annual publications. Certain unpublished information is available on request. Selected traveller statistics are shown in the following tables.

Short-term travel is subject to marked seasonal variation, December being the peak month for the arrival of overseas visitors and the departure of Australia residents.

**SHORT-TERM MOVEMENT: ARRIVALS AND DEPARTURES OF OVERSEAS VISITORS AND AUSTRALIAN RESIDENTS BY MONTH OF ARRIVAL OR DEPARTURE, AUSTRALIA, 1984**

(Persons)

Month	Overseas visitors		Australian residents	
	Arriving	Departing	Departing	Returning
January . . . . .	78,700	108,600	90,100	160,200
February . . . . .	84,500	85,800	78,800	88,700
March . . . . .	82,400	86,700	108,800	84,000
April . . . . .	83,300	84,000	126,300	94,100
May . . . . .	71,500	86,000	122,000	113,900
June . . . . .	74,700	64,400	125,100	100,300
July . . . . .	85,500	71,900	119,600	115,500
August . . . . .	75,100	85,400	148,800	118,600
September . . . . .	68,700	69,200	114,600	158,600
October . . . . .	86,800	73,500	101,600	139,800
November . . . . .	98,300	88,500	108,800	112,600
December . . . . .	125,700	81,700	174,100	88,400
<b>Total . . . . .</b>	<b>1,015,100</b>	<b>985,800</b>	<b>1,418,600</b>	<b>1,374,700</b>
Sea travellers as a percentage of Total . . . . .	0.64	0.45	0.41	0.39

**SHORT-TERM MOVEMENT—DEPARTURES OF AUSTRALIAN RESIDENTS: STATED PURPOSE OF JOURNEY AND INTENDED LENGTH OF STAY, 1984 (a)**

(Persons)

Intended length of stay	Main purpose of journey					Other and not stated	Total
	Visiting relatives	Holiday, accompanying business traveller (a)	Convention	Business	Employment		
Under 1 week . . . . .	3,800	17,800	3,000	32,100	1,300	4,800	62,800
1 week and under 2 weeks . . . . .	16,100	214,900	11,500	41,600	1,400	11,100	296,700
2 weeks and under 3 weeks . . . . .	23,200	222,000	6,000	32,600	1,300	10,100	295,200
3 weeks and under 1 month . . . . .	30,300	94,300	3,400	18,700	1,000	6,100	153,700
1 month and under 2 months . . . . .	75,300	135,000	4,500	28,200	2,400	10,500	255,900
2 months and under 3 months . . . . .	47,000	70,200	1,500	8,700	1,800	6,000	135,200
3 months and under 6 months . . . . .	43,500	60,300	500	6,100	3,000	6,300	119,500
6 months and under 9 months . . . . .	14,500	21,800	100	3,000	2,900	3,800	46,000
9 months and under 12 months . . . . .	8,200	16,300	*	2,200	5,300	6,100	38,200
Not definite, not stated . . . . .	3,100	8,100	500	1,100	300	2,500	15,500
<b>Total . . . . .</b>	<b>265,000</b>	<b>860,600</b>	<b>30,900</b>	<b>174,300</b>	<b>20,600</b>	<b>67,300</b>	<b>1,418,600</b>

(a) Includes Student vacation.

**SHORT-TERM MOVEMENT—ARRIVALS OF OVERSEAS VISITORS: STATED PURPOSE OF JOURNEY AND INTENDED LENGTH OF STAY, 1984 (a)**

(Persons)

Intended length of stay	Main purpose of journey					Employment	Other and not stated	Total
	In transit	Visiting relatives	Holiday, accompanying business traveller	Convention	Business			
Under 1 week . . . . .	64,200	8,800	99,200	3,200	46,100	1,400	7,600	230,500
1 week and under 2 weeks . . . . .	100	23,400	113,400	8,600	44,300	500	8,700	199,100
2 weeks and under 3 weeks . . . . .	*	34,900	95,200	4,700	22,100	400	5,900	143,200
3 weeks and under 1 month . . . . .	*	35,100	40,900	1,200	6,400	200	3,100	86,900
1 month and under 2 months . . . . .	*	78,700	59,400	1,300	10,100	800	6,500	156,900
2 months and under 3 months . . . . .	*	33,000	19,700	200	3,600	600	4,700	61,800
3 months and under 6 months . . . . .	*	32,400	20,400	100	3,500	2,100	7,400	65,900
6 months and under 9 months . . . . .	*	18,400	15,400	*	1,700	2,400	3,800	41,800
9 months and under 12 months . . . . .	*	3,700	3,300	*	1,200	3,800	8,100	20,300
Not definite, not stated . . . . .	*	2,100	2,600	100	900	300	2,700	8,900
<b>Total . . . . .</b>	<b>64,400</b>	<b>270,500</b>	<b>449,500</b>	<b>19,400</b>	<b>140,000</b>	<b>12,400</b>	<b>58,800</b>	<b>1,015,100</b>

(a) Asterisk (\*) denotes that figures are subject to sampling variability too high for most practical purposes.

The average intended length of stay abroad of Australian residents departing in 1984 for short-term visits abroad was 52 days. The average intended length of stay in Australia by short-term visits from overseas was 45 days. Of course, statistics for Australian residents refer to their total time away from Australia; for overseas visitors they refer only to the Australian portions of their trips.

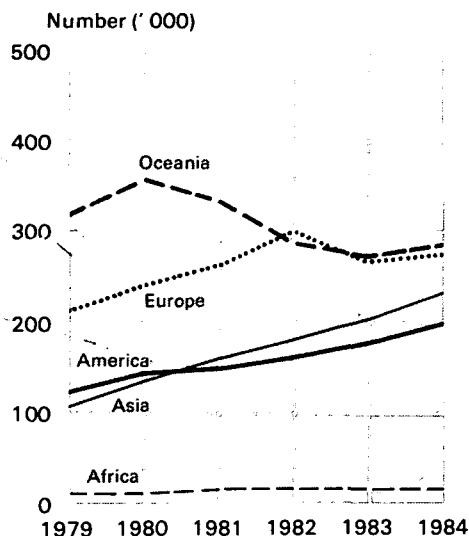
In the case of both Australian residents departing and overseas visitors arriving, the most common reason for visit was 'holiday', followed by 'visiting relatives' and 'business' as the second and third most common reasons.

**SHORT-TERM MOVEMENT: ARRIVALS OF OVERSEAS VISITORS AND DEPARTURES OF AUSTRALIAN RESIDENTS BY COUNTRY OF RESIDENCE/INTENDED STAY AND INTENDED LENGTH OF STAY, AUSTRALIA, 1984**

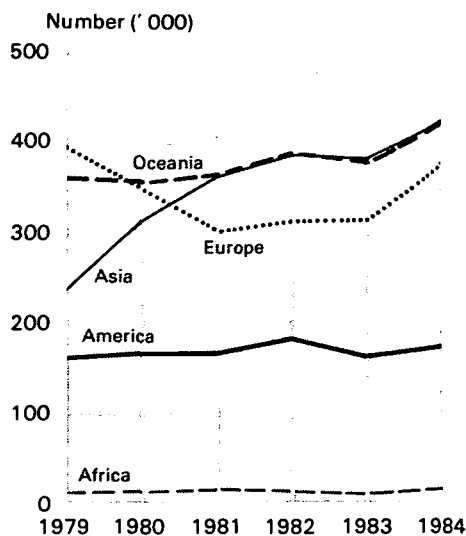
Country of residence (visitors) and country of intended stay (residents)	Arrivals of overseas visitors—intended length of stay					Total	Departures of Australian residents—intended length of stay					Total
	Under 1 week	1 week and under 1 month	3 months and under 3 months	Not definite, not stated, etc.	Total		1 month and under 3 months	3 months and under 12 months	Not definite, not stated, etc.	Total		
											12 months	
<b>Africa</b>												
South Africa . . . . .	1,900	3,300	3,800	1,500	100	10,600	2,400	3,900	1,500	*	7,800	
Other . . . . .	900	1,500	2,700	1,300	*	6,500	1,900	4,400	2,500	100	8,900	
<b>Total, Africa</b> . . . . .	<b>2,800</b>	<b>4,800</b>	<b>6,500</b>	<b>2,800</b>	<b>100</b>	<b>17,100</b>	<b>4,300</b>	<b>8,300</b>	<b>4,000</b>	<b>200</b>	<b>16,700</b>	
<b>America</b>												
Canada . . . . .	4,700	15,600	8,900	5,000	200	34,500	3,800	8,000	3,800	200	15,800	
U.S. America . . . . .	43,800	80,300	24,500	10,900	800	160,400	71,900	51,200	16,400	1,000	140,700	
Other . . . . .	1,000	1,900	1,100	1,800	200	5,900	6,000	7,300	4,000	400	17,500	
<b>Total, America</b> . . . . .	<b>49,500</b>	<b>97,800</b>	<b>34,500</b>	<b>17,700</b>	<b>1,200</b>	<b>200,800</b>	<b>81,700</b>	<b>66,500</b>	<b>24,200</b>	<b>1,600</b>	<b>174,000</b>	
<b>Asia</b>												
Hong Kong . . . . .	3,100	11,200	4,700	2,100	200	21,200	84,300	8,000	2,900	800	96,100	
India . . . . .	1,400	1,700	1,600	1,200	100	5,900	4,500	6,900	3,000	100	14,400	
Indonesia . . . . .	3,400	6,100	3,100	1,500	200	14,200	76,300	8,000	2,800	700	87,900	
Japan . . . . .	50,000	29,700	3,700	3,700	800	87,900	20,100	4,200	1,600	200	26,300	
Malaysia . . . . .	4,200	12,800	6,400	5,600	300	29,300	23,300	10,600	4,200	400	38,700	
Philippines . . . . .	2,100	2,200	1,900	2,000	100	8,300	16,300	8,400	1,700	200	26,700	
Singapore . . . . .	8,300	17,100	5,300	2,100	300	33,000	51,400	6,600	2,800	500	61,300	
Thailand . . . . .	1,400	2,200	1,100	700	100	5,400	15,500	3,200	1,000	200	19,800	
Other . . . . .	8,400	9,700	5,700	4,900	200	29,400	24,600	15,100	14,100	1,000	54,200	
<b>Total, Asia(a)</b> . . . . .	<b>82,300</b>	<b>92,700</b>	<b>33,500</b>	<b>23,800</b>	<b>2,300</b>	<b>234,600</b>	<b>316,300</b>	<b>71,000</b>	<b>34,100</b>	<b>4,100</b>	<b>425,400</b>	
<b>Europe</b>												
France . . . . .	2,600	3,600	3,100	1,700	100	11,200	2,500	7,000	3,300	200	13,000	
Germany(b) . . . . .	5,200	8,900	13,800	6,000	300	34,200	4,800	12,400	5,800	200	23,300	
Greece . . . . .	500	600	1,100	2,700	200	5,000	1,600	10,500	15,600	700	28,500	
Ireland(c) . . . . .	200	1,000	1,800	1,100	*	4,000	600	3,500	1,300	100	5,700	
Italy . . . . .	1,600	3,600	4,200	3,500	300	13,400	4,500	19,500	14,700	600	39,500	
Netherlands . . . . .	1,500	3,700	6,000	2,900	100	14,100	1,600	6,900	3,500	100	12,200	
Switzerland . . . . .	2,100	3,300	4,100	2,900	100	12,500	1,500	3,700	1,400	100	6,600	
United Kingdom . . . . .	16,300	39,500	58,300	30,800	800	145,500	24,800	111,100	57,000	1,900	194,800	
Yugoslavia . . . . .	300	400	1,100	2,700	100	4,700	700	5,900	8,400	400	15,400	
Other . . . . .	4,200	8,600	7,200	8,500	400	28,900	4,100	18,100	14,100	600	36,300	
<b>Total, Europe</b> . . . . .	<b>34,500</b>	<b>73,200</b>	<b>100,700</b>	<b>62,800</b>	<b>2,400</b>	<b>273,500</b>	<b>46,700</b>	<b>198,600</b>	<b>125,100</b>	<b>4,900</b>	<b>375,300</b>	
<b>Oceania</b>												
Fiji . . . . .	2,700	3,000	2,500	1,400	100	9,700	83,900	3,200	800	900	88,800	
New Caledonia . . . . .	1,800	2,900	2,000	600	100	7,400	23,200	500	200	300	24,200	
New Zealand . . . . .	46,900	142,300	30,500	13,500	1,300	234,400	193,700	33,700	7,300	2,500	237,200	
Papua New Guinea . . . . .	6,200	8,800	5,600	2,800	200	23,700	15,400	4,900	5,900	300	26,300	
Other . . . . .	3,400	3,100	2,200	2,100	200	11,000	40,700	3,100	1,800	400	46,000	
<b>Total, Oceania</b> . . . . .	<b>61,000</b>	<b>160,100</b>	<b>42,800</b>	<b>20,400</b>	<b>1,900</b>	<b>286,200</b>	<b>356,900</b>	<b>45,400</b>	<b>16,000</b>	<b>4,400</b>	<b>422,500</b>	
<b>Other.</b> . . . . .	<b>300</b>	<b>600</b>	<b>600</b>	<b>500</b>	<b>900</b>	<b>2,900</b>	<b>2,700</b>	<b>1,200</b>	<b>400</b>	<b>400</b>	<b>4,700</b>	
<b>Total</b> . . . . .	<b>230,500</b>	<b>429,200</b>	<b>218,700</b>	<b>128,000</b>	<b>8,900</b>	<b>1,015,100</b>	<b>808,400</b>	<b>391,100</b>	<b>203,700</b>	<b>15,500</b>	<b>1,418,600</b>	

(a) Asia includes countries which are frequently regarded as 'Middle East' countries, for example Iraq, Lebanon, Syria, etc. This inclusion is based on United Nations' classification of world regions. (b) Comprises the German Democratic Republic and the Federal Republic of Germany. (c) Includes Republic of Ireland and Ireland, undefined.

**VISITOR ARRIVALS, SHORT TERM,  
BY USUAL RESIDENCE,  
1979 TO 1984**



**RESIDENT DEPARTURES, SHORT TERM,  
BY REGION OF INTENDED  
STAY, 1979 TO 1984**



**PLATES 46 and 47**

**Survey of International Visitors (IVS)**

A survey on the travel behaviour and attitudes of international visitors to Australia was commissioned by the Australian Tourist Commission, and conducted by the Roy Morgan Research Centre, for the years 1979-80 and 1981. Commencing in 1983 the survey is being conducted on an annual basis.

Details contained in the survey include the arrival statistics, profile, itinerary, trip satisfaction and expenditure of short-term visitors to Australia (defined as foreign residents staying in Australia for a period of less than twelve months).

**Domestic Travel**

Information about domestic travel patterns of residents within Australia in 1983 was collected in the Domestic Travel and Tourism Survey. Survey results show, for trips by persons aged 15 and over which involved an overnight absence from their usual residence, what was the main purpose of the trip; number of nights away by persons; main mode of transport; main destination; area of origin; distance travelled and main type of accommodation.

The survey results show that the main purposes of trips were holiday or recreation (42%), visiting friends and relatives (35%), and work or business (16%). The main mode of transport used was the car (80%) and over half (56%) of the trips involved either one or two nights away.

The following tables contain data obtained from the survey. More detailed information is available in the publication *Domestic Travel and Tourism Survey, Australia, 1983* (9216.0)

## SUMMARY OF PERSON TRIPS AND NIGHTS AWAY, 1983

State of origin	Estimated average in scope population ('000)	Person trips ('000)	Person trips per person	Nights away by persons ('000)	Nights away per person	Nights away per person trips	Stop-overs by persons ('000)	Proportion of	Household trips ('000)
								person trips with stop-overs %	
New South Wales . . . . .	4,060.7	18,201.4	4.5	78,354.9	19.3	4.3	3,391.2	18.6	13,742.1
Victoria . . . . .	3,041.4	14,138.8	4.6	58,934.5	19.4	4.2	3,224.9	22.8	10,466.7
Queensland . . . . .	1,841.1	8,539.1	4.6	40,422.3	22.0	4.7	2,197.5	25.7	6,405.8
South Australia . . . . .	1,023.1	4,438.2	4.3	19,583.7	19.1	4.4	985.0	22.2	3,398.6
Western Australia . . . . .	1,011.1	4,458.8	4.4	24,186.2	23.9	5.4	974.4	21.9	3,359.6
Tasmania . . . . .	324.3	1,097.2	3.3	4,998.6	15.4	4.6	94.6	8.6	757.6
Northern Territory . . . . .	92.3	235.7	2.6	1,673.5	18.1	7.1	152.8	64.8	174.0
Australian Capital Territory . . . . .	165.2	1,016.8	6.2	4,157.3	25.2	4.1	175.7	17.3	735.7
<b>Total . . . . .</b>	<b>11,559.2</b>	<b>52,125.8</b>	<b>4.5</b>	<b>232,311.0</b>	<b>20.1</b>	<b>4.5</b>	<b>11,196.2</b>	<b>21.5</b>	<b>39,040.1</b>

**NUMBER OF PERSON TRIPS BY MAIN PURPOSE OF TRIP AND DISTANCE TRAVELLED ('000 PERSON TRIPS)**

Distance travelled	Main purpose of trip					Total
	Work/ Business	Holiday/ Recreation	Visit Friends/ Relatives	Other	Not sought	
Within a region(b) . . . . .	1,297.6	5,213.2	7,788.4	953.5	..	15,252.7
100 km and under . . . . .	582.6	3,791.6	2,188.2	347.6	..	6,910.0
101-200 km . . . . .	1,321.3	4,039.7	2,779.9	536.4	..	8,677.3
201-500 km . . . . .	2,464.1	5,596.5	3,484.4	895.4	..	12,440.4
501-1,000 km . . . . .	1,511.5	2,062.6	1,193.9	362.1	..	5,130.2
1,001-2,000 km . . . . .	677.1	921.3	522.4	151.3	..	2,272.0
Over 2,000 km . . . . .	271.6	329.4	205.5	34.0	..	840.5
Not sought(a) . . . . .	..	..	..	..	401.6	401.6
Destination unknown . . . . .	55.1	113.5	25.7	6.8	..	201.2
<b>Total . . . . .</b>	<b>8,180.9</b>	<b>22,067.8</b>	<b>18,188.4</b>	<b>3,287.1</b>	<b>401.6</b>	<b>52,125.8</b>

### Tourism

As a country, Australia offers domestic and international travellers a wide variety of tourism experiences. Its temperate climate and natural features of tropical forests, mountain ranges, pastoral regions and beaches provide a sharp contrast to the isolated outback, desert regions and attractions of an historical nature. Its major cities, linked by efficient modes of transport, offer cultural and recreational pursuits and modern accommodation and convention and meeting facilities.

Australia increasingly is seen as an exciting but safe tourism destination in an environment of economic, political and social stability among a warm, friendly and hospitable people.

#### Economic and Social Importance

Australia is a country rich in tourism resources. Tourism in Australia is now fully recognised as an industry and an area of Government policy concern in its own right.

A Bureau of Industry Economics report (BIE 1984) revealed that tourism is of major significance to the Australian economy. It estimated that tourism accounts for 4.8 per cent of Australia's Gross Domestic Product (GDP) and is responsible for employing 5.2 per cent of the workforce (equivalent to the combined textiles, clothing, footwear and motor vehicle industries, or the mining industry). In 1981-82, the gross expenditure by domestic and overseas travellers in Australia was estimated to total almost \$12.7 billion.

The emergence of tourism as a major industry has been associated with a combination of conditions in Australia and overseas which are likely to continue to produce further expansion in the future. These factors include increasing general levels of affluence, increasing leisure time arising from shorter working hours and early retirement, saturation of demand for consumer durables and improvements in the quality of facilities and services available to travellers.

In the context of these developments, both the Commonwealth and State Governments have become increasingly aware of the importance of tourism as an instrument of Government policy and their respective roles in this field have expanded accordingly. Governments have in particular recognised the potential of tourism to stimulate economic growth and generate employment opportunities.

#### **Allocation of Tourism Responsibilities within the Public Sector**

In broad terms the Commonwealth Government is responsible for international aspects of tourism development and the formulation and implementation of relevant national policies.

The State and Territory governments, in conjunction with local government, bear responsibility for the provision of public infrastructure and facilities and other more specific, localised services and regulations. Other responsibilities with broad implications or significance are shared between Federal, State and Territory governments.

#### **Tourism Industry**

The tourism industry incorporates a wide range of activities. These include, principally, the travel, accommodation, catering, hospitality, retail and meetings and conventions sectors as well as many other sectors of industry. The industry has been identified by all Australian governments as a growth area, offering attractive opportunities for investment in tourism development projects and as a major employer of labour.

Tourism has a higher than average labour intensity and has considerable potential for providing employment for certain groups (such as unskilled and semi-skilled workers) who are otherwise vulnerable to unemployment. There are also opportunities for the employment of other groups such as women and part-time workers who cannot, or prefer not to, work conventional working hours.

As a way of heightening awareness of the Australian tourism product and to encourage excellence in the industry, an annual series of National Tourism Awards was inaugurated in September 1984.

#### **Tourism Overseas Promotion Scheme**

The *Tourism Overseas Promotion Scheme* (TOPS), which was announced on 19 June 1985, provides for the payment of taxable grants to Australian tourism operators to encourage them to attract increasing numbers of overseas tourists to Australia. The grant rate under TOPS is 70 cents in the dollar of eligible expenditure incurred in approved promotional activities.

The Scheme is funded by the Commonwealth Government and provides assistance to the tourism industry to replace the tourism provisions formerly incorporated in the *Export Market Development Grants Scheme*.

#### **Major Tourism Projects**

Based on information provided by the State/Territory tourism authorities, the Department of Sport, Recreation and Tourism has estimated that, at the end of the June 1985 quarter, there were some \$2,118 million of major tourism projects under construction and another \$3,548 million of projects firmly committed to commence construction within eighteen months thereafter.

Commencements in the 1984-85 financial year alone totalled more than \$1,224 million and it is estimated these projects will have provided about 35,000 man-years of employment during construction and, when operational, have required employment of around 5,000 permanent full and part time staff.

#### **Department of Sport, Recreation and Tourism**

Since its formation in March 1983, the Department of Sport, Recreation and Tourism has been specifically involved in a range of policy, administrative and consultative activities designed to encourage the efficient development of tourism in Australia in co-operation with the industry and with Commonwealth and State/Territory government departments.

Major functions of the Department include:

- formulation of policy proposals, transmission of advice to the Minister on industry issues, administration of the *Australian Tourist Commission Act*, conduct of research into the tourism and travel industries, provision of secretarial support to a number of consultative councils and committees and liaison with international tourism organisations.

Specific mechanisms exist to achieve these objectives through consultation and liaison.

These include the following:

- The *Tourist Ministers' Council* (TMC), which was established in 1959 and comprises the Commonwealth, State and Territory Ministers responsible for tourism.
- The *Australian Standing Committee on Tourism* (ASCOT), which comprises representation from the Department of Sport, Recreation and Tourism, the Australian Tourist Commission and the State and Territory Directors of Tourism or their equivalent.
- The *Tourism Research Committee* (TRC), which undertakes research as directed by ASCOT, comprises research officers from the Department of Sport, Recreation and Tourism, the Australian Tourist Commission and the State and Territory authorities responsible for tourism.
- The *Tourism Advisory Council* (TAC), which is chaired by the Minister for Sport, Recreation and Tourism and includes senior representatives from the tourism industry and trade unions; and
- The *National Tourism Industry Training Committee* (NTITC), a tripartite body of representatives from industry, union and government, concerned with promoting, developing and co-ordinating training in tourism.

The Department is also responsible for Australia's bilateral and multilateral tourism relations and contributes to the development of international tourism through Australia's membership of the following:

- The *World Tourism Organization* (WTO), an executing agency of the *United Nations Development Program* (UNDP), which examines all sectors of tourism on a world-wide basis. Australia has been a full member of the WTO since September 1979 and currently is chairman of WTO's Regional Commission for East Asia and the Pacific (CAP).
- The *Tourism Committee of the Organisation for Economic Co-operation and Development* (OECD). The Committee promotes co-operation between member countries in the field of tourism through examination of issues such as transportation, energy, accommodation, employment, investment and profitability in the light of changing economic conditions.
- The *Economic and Social Commission for Asia and the Pacific* (ESCAP), a regional commission of the UN Economic and Social Council concerned with economic and social development (including tourism development) in member countries.

#### **Australian Tourist Commission**

The Australian Tourist Commission was established in 1967. It is a statutory authority and has the role of encouraging visits to Australia by people from other countries and travel within Australia by overseas visitors and Australians.

The Commission's activities are overseen by twelve Commissioners including representatives of the Commonwealth, State and Territory governments and the tourism industry. It has a staff of 90 worldwide and a budget allocation of \$26 million in 1985-86.

The Commission engages in a wide variety of marketing activities including consumer and trade advertising, industry seminars and familiarisation visits for travel agents, journalists and photographers. Funding increases in recent years have enabled it to expand its worldwide activities and, in particular, to undertake a major enhanced awareness campaign in the United States. A domestic tourism campaign aimed at encouraging Australians to see more of their own country was commenced in 1984.

The Commission has its head office in Melbourne and branch offices in Sydney, Auckland, London, Frankfurt, New York, Los Angeles, Tokyo and Singapore. It also employs representatives in Bahrain, Hong Kong, Vienna, Amsterdam, Paris, Athens, Rome, Milan, Copenhagen, Madrid, Basel and Toronto, together with a further eight representatives in the United Kingdom.

#### **Tourist Accommodation**

*Census of Retail Establishments and Selected Service Establishments.* Data relating to accommodation establishments have been collected as part of the 1979-80 census. For the detailed statistics see *Census of Retail Establishments and Selected Service Establishments, Details of Operations by Industry Class, Australia, 1979-80* (8622.0). (See also Chapter 17, Manufacturing and Internal Trade).

*Surveys of Tourist Accommodation Establishments.* Quarterly accommodation surveys were commenced in the September Quarter 1975 and data published from these surveys include room occupancy, bed occupancy and takings from accommodation.

The main purpose of the surveys of tourist accommodation establishments is to measure the utilisation of available tourist accommodation. For detailed statistics from the survey see *Tourist Accommodation, Australia* (8635.0).

## TOURIST ACCOMMODATION (a)

		March quarter 1984	June quarter 1984	September quarter 1984	December quarter 1984	March quarter 1985	June quarter 1985
<b>LICENSED HOTELS WITH FACILITIES(b)</b>							
Establishments . . . . .	Number	1,052	1,045	1,048	1,054	1,051	1,059
Guest rooms . . . . .	"	31,910	32,172	33,092	33,856	34,158	34,657
Bed spaces . . . . .	"	77,601	78,445	81,218	82,781	83,894	85,968
Room occupancy rates . . . . .	%	52.0	52.2	54.0	52.9	53.7	52.4
Bed occupancy rates . . . . .	%	33.0	32.6	34.2	32.9	33.8	32.1
Gross takings from accommodation	\$'000	75,025	74,213	84,486	87,190	91,112	92,468
<b>MOTELS, ETC.(b)</b>							
Establishments . . . . .	Number	2,774	2,796	2,811	2,829	2,839	2,856
Guest rooms . . . . .	"	71,590	72,474	73,431	73,518	74,043	74,075
Bed spaces . . . . .	"	211,270	213,832	216,350	218,190	220,106	220,821
Room occupancy rates . . . . .	%	55.5	54.9	57.6	54.2	57.2	55.5
Bed occupancy rates . . . . .	%	35.5	33.9	35.7	32.7	36.3	33.8
Gross takings from accommodation	\$'000	138,055	138,878	152,465	143,371	155,731	152,825
<b>TOTAL</b>							
Establishments . . . . .	Number	3,826	3,841	3,859	3,883	3,890	3,915
Guest rooms . . . . .	"	103,500	104,646	106,523	107,374	108,201	108,732
Bed spaces . . . . .	"	288,871	292,277	297,568	300,971	304,000	306,789
Room occupancy rates . . . . .	%	54.4	54.1	56.5	53.8	56.1	54.5
Bed occupancy rates . . . . .	%	34.8	33.6	35.3	32.7	35.6	33.3
Gross takings from accommodation	\$'000	213,080	213,091	236,951	230,560	246,844	245,293
<b>CARAVAN PARKS(b)</b>							
Establishments . . . . .	Number	1,876	1,870	1,868	1,873	1,872	1,879
Powered sites . . . . .	"	139,914	139,849	140,054	140,139	140,774	141,473
Unpowered sites . . . . .	"	62,251	62,538	61,875	63,512	62,479	61,994
Cabins, flats, etc. . . . .	"	3,809	3,935	3,952	4,004	4,087	4,033
<i>Total capacity</i> . . . . .	"	205,974	206,322	205,881	207,655	207,340	207,500
Site occupancy rates . . . . .	%	30.4	22.3	20.8	23.6	30.7	22.3
Gross takings from accommodation	\$'000	38,041	29,290	29,470	34,757	42,583	32,270

(a) For the purposes of this survey, a tourist accommodation establishment is defined as an establishment which predominantly provides short term accommodation (i.e. for periods of less than two months) available to the general public. (b) For definitions see *Tourist Accommodation, Australia* (8635.0).

The 1983 Survey of Domestic Travel and Tourism (see page 685) indicated that the main types of accommodation used were homes of friends or relatives (52%), hotels or motels (16%) and caravan parks or camping grounds (11%). The following table classifies the main type of accommodation used by the main purpose of the trip. For detailed statistics from the survey see *Domestic Travel and Tourism Survey, Australia* 1983 (9216.0).

**NUMBER OF PERSON TRIPS BY MAIN  
TYPE OF ACCOMMODATION AND MAIN PURPOSE OF TRIP  
('000 PERSON TRIPS)**

Main type of accommodation	Main purpose of trip					Total
	Work/ Business	Holiday/ Recreation	Visit Friends/ Relatives	Other	Not sought	
Hotel/motel . . . . .	3,463.3	3,474.6	700.9	483.7	..	8,122.5
Friends/Relatives residence . . . . .	1,630.0	7,069.6	16,824.1	1,469.0	..	26,992.6
Caravan park/camping ground . . . . .	425.8	4,789.3	274.1	132.5	..	5,621.7
Rented house/flat . . . . .	334.7	2,291.3	165.0	130.4	..	2,921.4
Other . . . . .	2,160.6	4,348.7	186.1	1,024.1	..	7,719.5
No overnight stay at main destination . . . . .	166.5	94.3	38.2	47.4	..	346.4
Not sought(a) . . . . .	..	..	..	..	401.6	401.6
<b>Total . . . . .</b>	<b>8,180.9</b>	<b>22,067.8</b>	<b>18,188.4</b>	<b>3,287.1</b>	<b>401.6</b>	<b>52,125.8</b>



**BIBLIOGRAPHY****ABS Publications**

Census of Retail Establishments and Selected Service Establishments, Details of Operations by Industry Class, Australia, 1979–80 (8622.0)  
Tourist Accommodation, Australia (8635.0)  
Domestic Travel and Tourism Survey, Australia 1983 (9216.0)

**Other Publications**

Department of Sport Recreation and Tourism, Australian Tourism Trends—An Overview  
Additional information relating to this chapter is available in the annual reports and other publications of the Departments and Organisations referred to.

## AUSTRALIA PREPARES FOR ITS BICENTENARY

*(This special article has been contributed by the Australian Bicentennial Authority)*

Australia's Bicentennial celebrations are being planned as a year-long program recognising all aspects of the nation's life and heritage. A great diversity of projects and events is in preparation at national, state and local levels. The program sets out to involve some 16 million Australians in spectacular events, community based activities and projects that satisfy long-term educational goals as well as providing 'bricks and mortar' projects that will leave lasting and worthwhile memorials.

The Bicentenary commemorates the 200th anniversary of permanent European settlement in Australia. It marks the events of 26 January 1788, when the eleven ships of Captain Arthur Phillip's First Fleet arrived from Britain and gathered in Port Jackson to found the colony of New South Wales.

The 1988 program offers Australians the opportunity to contribute effectively to their own national celebrations and to use the year to extend their range of ideas and experience about what it is to be Australian. The Bicentenary will encourage Australians to develop a unity and common purpose as a nation. It provides an ideal opportunity to focus worldwide attention on Australia in tourist, economic, social and cultural terms.

### **The Australian Bicentennial Authority**

In co-operation with the Governments of the States and the Northern Territory, the Commonwealth Government announced its intention to establish The Australian Bicentennial Authority in April 1979 to co-ordinate a national program of celebrations. The Authority was incorporated in the Australian Capital Territory as a company limited by guarantee with a representative Board of Directors nominated by the Commonwealth, State and Northern Territory Governments.

The Authority's task is to plan, co-ordinate and promote the celebrations for the Bicentenary. It is essentially a catalytic role to foster the widest possible participation. The brief includes encouraging involvement in the program by the shareholder governments, local government authorities, community groups, the corporate sector, the public generally and the international community.

At its inception, the Authority faced a daunting task. For a start, there were no precedents, no guidelines. Also, in the early years it was difficult to impress upon the nation the need for long-range planning and early financial commitments.

The problem of how to make the Bicentenary relevant to a nation of such cultural diversity was tackled by asking the people how they wished to commemorate the 200th anniversary.

This was a lengthy process, involving consultations with thousands of Australians throughout the country. The results of these consultations and subsequent commissioned research provided the basis for the principles that have been developed as the foundation for all Bicentennial planning.

Here are the main findings:

1. More than 80 percent of Australians, wherever they live and whatever their ethnic origins, believe it is 'important' or 'very important' to have a major national celebration in the Bicentennial year.
2. Australians believe that, while spectacles are necessary ingredients of celebration, it is important to ensure that the emphasis in the overall Bicentennial program is on wide-ranging educational and cultural pursuits, designed to strengthen national unity and identity. They also assert that much-needed community facilities should be established to remind present and future generations that 1988 was a significant year in the development of modern Australia.
3. Communities everywhere wish to plan their own local celebrations.

Consequently, the Authority moved quickly to decentralise the planning. Bicentennial Councils have been established in each state and territory. As well, a network of Bicentennial Community Committees is being set up in local government areas.

Towards the end of 1985 over 520 of these committees had been formed. The Authority's target is to have a committee in each of the 830 or so local government areas in Australia. The final tally will represent a workforce of tens of thousands of dedicated Australians nationwide, working on local and regional plans for the Bicentenary.

The primary aims of these committees are to develop balanced community celebrations programs reflecting the Bicentennial objectives; to stimulate local interest; and to provide a link with branches of the Authority and the wider Bicentennial network.

In May 1985, the Commonwealth Government announced a \$17.5 million grants program aimed at helping local government authorities around Australia to undertake Bicentennial activities. The scheme was developed by the Australian Bicentennial Authority to involve local communities in the celebrations of 1988.

### **Objectives**

The Authority's planning principles and strategy are based on the following objectives:

1. To celebrate the richness of diversity of Australians, their traditions and the freedoms which they enjoy.
2. To encourage all Australians to understand and preserve their heritage, recognise the multicultural nature of modern Australia, and look to the future with confidence.
3. To ensure that all Australians participate in, or have access to, the activities of 1988, so that the Bicentenary will be a truly national program in both character and geographic spread.
4. To develop projects and programs which will provide significant and enduring legacies to present-day Australians and future generations.
5. To project Australia to the world and invite international participation with the aim of strengthening relationships with other nations.

The Bicentennial Program provides an opportunity to re-examine Australia's history, spanning more than 40,000 years but with particular emphasis on the past 200 years. It will encourage the Australian people to look at themselves critically and to undergo a process of national self-assessment. But as well as this re-appraisal of the nation's past, the program will focus on the present and future—on Australia today, its place in the world and options for tomorrow.

The development of a theme for the Bicentennial program was one of the Authority's earliest priorities. 'Living Together' was chosen as a reflection of co-operative effort by every Australian, irrespective of background. It is a forward-looking theme that describes an ongoing process and refers to a program yet uncompleted.

### **Projects and Events**

One of the major components of the National Program being co-ordinated by the Australian Bicentennial Authority is the Commonwealth/State Bicentennial Commemorative Program. Under this scheme, the Commonwealth Government has made a total of \$48 million available on a matched funding basis to State and Territory Governments for Bicentennial capital works that will be of a lasting nature; appropriate to the Bicentenary; completed or in place by 31 December 1988; and useable by or available to a broad cross-section of the community.

The program comprises some thirty projects, including the Newcastle Harbourside Park, which is a foreshore beautification scheme to regenerate 15 hectares of the seaport city's industrial frontage; the Melbourne Waterways Program, designed to clean up, beautify and restore some of Melbourne's creeks and rivers, particularly in the western and inner suburbs; the Australian Stockman's Hall of Fame in Longreach, Queensland, developed in honour of the pioneers who opened up the interior of Australia; establishment of a marine park around the Ningaloo reef on Western Australia's central west coast to preserve part of over 250 kilometres of coral reef and its adjacent shores; and an Outback Interpretive Centre at Port Augusta in South Australia.

The Australian Bicentennial Exhibition is the largest single activity being undertaken by the Authority as part of its National Program. It will be an innovative travelling display examining Australia's past, present and future. The giant touring show will be on the road from mid 1987 and over a period of 18 months will travel the length and breadth of the country, visiting about 47 cities and towns.

Following a national competition, the architectural firm, Daryl Jackson Pty Ltd., was appointed to design the mobile venue for the exhibition. The Commonwealth Department of Housing and Construction has responsibility for overseeing the design and structural phases.

The Exhibition will explore the changing nature of relationships between people, and with the environment; the development of an Australian identity; Australian achievements; and directions for the future.

Tall Ships Australia 1988 will be one of the most spectacular events of the Bicentennial year. Vessels taking part will gather in Hobart and then race to Sydney, arriving from 19 January 1988 onwards. They will depart Sydney in a Parade of Sail on 26 January.

A number of square riggers approaching across the Indian Ocean will be invited to call at Fremantle, Albany, Port Lincoln, Adelaide and Melbourne before arriving in Hobart. Those ships approaching across the Pacific Ocean will be invited to call at Brisbane, Melbourne or Launceston.

The race from Hobart to Sydney is being planned as an international Tall Ships Race conducted by the Authority in association with the Sail Training Association (U.K.).

Invitations have been extended by the Australian Government to 30 countries which own or operate sail training vessels. It is expected that vessels will attend from Spain, the United States, Japan, the Federal Republic of Germany, Poland, the USSR, Brazil and New Zealand. There are also encouraging signs that vessels from the United Kingdom, Norway, Portugal, India and Columbia will be among the acceptances. Invitations have been sent by the Authority to a further 250 non-government owned vessels from overseas.

Planning Committees have been set up in Tasmania, South Australia, Western Australia, Victoria and Queensland to prepare a welcome for the ships and their crews. The visiting trainees will be entertained by young Australians and given an opportunity to experience life in this country.

After the grand Parade of Sail vessels will return to their home ports, or, if time permits, they will be encouraged to visit other Australian ports.

The Bicentennial Science Centre is proposed as a major commemorative project.

The Centre, which is to be built in Canberra, will adopt the 'hands-on' approach to help people to understand the discoveries and developments in science and technology. An information and extension service will be established to give Australians in all states and territories access to the centre's resources, and an exchange of exhibits with scientific institutions in each state and territory will be arranged.

The National Program for 1988 places considerable emphasis on education and information activities to encourage Australians to discover more about themselves, their past, their country and the possibilities for the future.

Development of community events provides for education projects and schools involvement; Aboriginal and Torres Strait Islander participation; multicultural events; an interfaith program of activities involving the major faiths and denominations; and programs to foster involvement by older Australians, people with disabilities; unions, youth, and women.

A wide-ranging program of special Bicentennial events features national and international activities such as a Military Tattoo that will tour all states, the Bicentennial Air Show, an around Australia air race, an across Australia balloon challenge and Bicentennial barnstorming with vintage aircraft; spectacular opening and closing ceremonies; a major naval review; funding for community-originated environmental and heritage projects; and commissioning of documentaries and cinema shorts. A series of publications to be produced for the Bicentenary includes the 'Encyclopaedia of the Australian People', which is being developed by the Research School of Social Sciences at the Australian National University. It will document the diverse origins and ways of life of Aboriginal Australians, Torres Strait Islanders and the different cultural groups that have settled this country in successive waves of immigration.

A Futures Project is being developed to encourage all Australians to use the Bicentenary to focus on their aspirations for the future. The Project will revolve around the publication and dissemination of a comprehensive series of issues papers which will be used in connection with consultations, workshops and conferences at the local, regional and national level.

The Bicentennial Sport and Recreation Program will present an extensive range of national, international and special events in such areas as track and field, tennis, hockey, football, cricket, sailing, golf, skiing and motor-racing.

The Arts and Entertainment Program being developed for 1988 will see Australian tours by some of the world's leading artists and performing groups in 1988. As well, some of Australia's best artists, Australian dance and theatre companies and musicians will have a chance to perform on the world stage. There is an extensive commissionings program to encourage the creation of new and exciting works across the entire arts spectrum.

The Commonwealth-funded National Program will be complemented by other Australian Government initiatives, including the new Parliament House in Canberra, the national Bicentennial Road Development Program and development of the Australia Telescope in New South Wales.

The Australian Government's financial commitment also gives an important lead to other spheres of government.

As well as hosting Expo 88, and commitment of funds to a number of major projects under the Joint Commonwealth/State Commemorative Program, the Queensland Government is also supporting a state program of celebrations which will include some special projects, as well as funds to assist the involvement of every local government authority in the state.

The New South Wales Government is allocating funds for a State Bicentennial Program. This is expected to include per capita grants to local government areas, similar to the scheme operating under the National Program.

The state is also undertaking some large-scale capital works, including the redevelopment of Sydney's Darling Harbour as a venue for conferences, exhibitions, trade fairs and public recreation.

Other state/territory governments have announced Bicentennial funding programs or are expected to announce them in the near future.

#### **Corporate Involvement**

The Authority is addressing the question of corporate-sector involvement. Companies can become involved in several ways. For example, they may wish to enter into joint ventures with the Authority to give financial support to the program of national and international activities; they can develop and fund their own activities; or they can become suppliers of services.

#### **International Involvement**

Foreign governments are beginning to address the question of their participation in the Bicentenary.

The Washington-based American-Australian Bicentennial Foundation has been set up by the United States Government and the British Government has established a high-level committee to mastermind the United Kingdom's involvement. Other countries which now have special committees working on plans for Australia's Bicentenary are the Federal Republic of Germany, France, the Netherlands, New Zealand and Japan.

#### **Australia on show**

The Bicentenary presents a unique opportunity for Australia to take centre stage internationally in 1988.

Opportunities for tourism are very significant. Already, more than 200 major international and national gatherings have been arranged for 1988. They will involve young people, voluntary organisations, sporting groups, professional associations and societies.

In its well advanced planning for 1988 The Australian Bicentennial Authority has put the framework in place for a celebrations program that will reflect the interests and priorities of the Australian people, and provide lasting benefits to the nation.

## CHAPTER 27

### THE TERRITORIES OF AUSTRALIA

The internal Territories of Australia are the Northern Territory and the Australian Capital Territory including Jervis Bay. External Territories under the control of Australia are: Norfolk Island; the Territory of Heard and McDonald Islands; the Australian Antarctic Territory; the Territory of Cocos (Keeling) Islands; the Territory of Christmas Island; the Coral Sea Islands Territory and the Territory of Ashmore and Cartier Islands.

More detailed statistics and additional descriptive matter are to be found in the Annual Reports of the Administrations of the various Territories and in the *Northern Territory Statistical Summary* (1306.7) and the *Australian Capital Territory Statistical Summary* (1307.8) issued by the ABS. Statistics for the Northern Territory and the Australian Capital Territory are also included in chapters dealing with particular subjects.

### THE NORTHERN TERRITORY

#### General description

The total area of the Northern Territory is 1,346,200 square kilometres.

The Northern Territory seat of Government is Darwin on the North Coast. The estimated resident population of the Darwin Statistical Division at 30 June 1984 was 66,100.

#### Northern Territory Self-Government

The Northern Territory was established as a self-governing territory by the *Northern Territory (Self-Government) Act 1978* of the Commonwealth. Under that Act, the Commonwealth transferred most of its powers to the Government of the Northern Territory.

In all fields of transferred power, the Government is similar to that of the Australian States, with some differences in titles, for example there is an Administrator instead of a Governor and a Chief Minister instead of a Premier.

The Administrator, appointed by the Governor-General, has responsibility for administering the Government of the Northern Territory. The Administrator is advised by an Executive Council comprised of all Northern Territory Ministers, led by the Chief Minister. The Administrator acts with the advice of the Executive Council on all matters transferred to the Northern Territory. He acts with Commonwealth advice on matters not transferred.

The Legislative Assembly of the Northern Territory is the Northern Territory's Parliament. It has 25 Members, which are elected for a period of four years. A Speaker is elected by, and Ministers are appointed from, the Members of the Legislative Assembly. A Ministry of nine is responsible for the administration of all transferred powers and acts through a number of departments and authorities, most of which are staffed by the Northern Territory Public Service.

Local Government was established in Darwin in 1957 and afterwards in regional centres. Municipal councils are elected by universal adult franchise, with elections at intervals of not more than three years. Provision has been made for a limited form of local government by smaller communities. There has been considerable interest in this provision, particularly in Aboriginal communities.

#### Development of Administration

Upon the extension of New South Wales westwards to the 129th east meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 it was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1 January 1911.

From 1911 until 30 June 1978, the Commonwealth administered the Northern Territory under the provisions of the *Northern Territory (Administration) Act 1910*, as amended. The Act provided for an Administrator, appointed by the Governor-General, to administer the Northern Territory on behalf of the Commonwealth Government.

By amendment of the Act in 1947, a Legislative Council comprising seven official and six elected members, with the Administrator as President, was created to make laws for the peace, order and good government of the Northern Territory. Composition of the Legislative Council was changed by further amendment in 1959 to provide for six official members, three nominated non-official members and eight elected members, and for an Administrator's Council to advise the Administrator. The Act was further amended in 1974 to provide for a Legislative Assembly of 19 elected Members and for a Speaker to be one of those Members, elected by the Members.

Laws passed by the Assembly were presented to the Administrator for assent. The Administrator was required to reserve laws on specific subjects for the pleasure of the Governor-General who was empowered to assent, withhold his assent or refuse his assent in part to such laws, or to return them to the Assembly with recommended amendments.

On 1 January 1977, the Commonwealth Government began a program of transferring executive powers to the Legislative Assembly by amendment of the *Northern Territory (Administration) Act*. A separate Northern Territory Public Service was created and administrative powers were transferred. Positions of Executive Member were created under the Act. These Members exercised ministerial-type powers in respect of transferred matters such as policy, fire brigade, local government and correctional services. An Executive Council replaced the Administrator's Council.

On 1 July 1978, the *Northern Territory (Self-Government) Act* came into force and established the Northern Territory as a body politic under the Crown. This Act also provided for the appointment of an Administrator by the Governor-General. It created offices of Ministers of the Northern Territory who, together with the Administrator, comprise the Executive Council of the Northern Territory. A Northern Territory Government, comprised of Ministers of the Northern Territory, was established with full responsibility for a range of state-type transferred powers administered through a Northern Territory Public Service and a Treasury. A Northern Territory flag was raised for the first time on 1 July 1978, the date upon which the Northern Territory became self-governing.

Major matters not transferred on 1 July 1978 were the mining of uranium and other prescribed substances, Aboriginal land matters, health, education and the Supreme Court. Powers in respect of health, education and the Supreme Court were progressively transferred from the Commonwealth to the Northern Territory Government during 1979.

At the end of 1979, the only major powers retained by the Commonwealth in the Northern Territory were those relating to rights in respect of Aboriginal land and the mining of uranium and other prescribed substances. Since the end of 1979, the Northern Territory, although remaining a Territory of the Commonwealth and still subject to Commonwealth laws made under Section 122 of the Constitution, is in most respects a self-governing Territory.

The Northern Territory is represented in the Parliaments of the Commonwealth by one Member in the House of Representatives and two Senators, whose terms of office coincide with that of the member in the House of Representatives. Since October 1984 the Cocos (Keeling) Islands have been included in the Northern Territory electorate for the purposes of all Federal elections and referenda.

#### **Physical geography and climate**

The Territory is within the torrid zone, with the exception of a strip about 300 kilometres wide which lies south of the Tropic of Capricorn.

The low flat coastline seldom reaches a height of 30 metres. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and laterite form the occasional cliffy headlands. The coastline of 6,200 kilometres is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries. The only practicable deep-water port for general use, however, is Darwin.

Inland, the country generally is devoid of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the seventeenth or eighteenth parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply for the interior system. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east-west trend.

There are two main climatic divisions: the wet season, November to April; and the dry season, May to October. The changes of weather are uniform and regular. Nearly all the rainfall occurs in the summer months.

### **Fauna and flora**

The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, freshwater tortoises, snakes (mostly non-venomous), and frogs abound. There are many varieties of freshwater fish and littoral Mollusca. Butterflies and beetles are strongly represented. The termite is a pest which is capable of serious damage to wooden buildings unless special preventive measures are taken. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Buffaloes exist in large herds on the northern coastal plains. Most types of native fauna are protected.

The vegetation is north Australian in type, but a number of forms belong to the Malayan and Oceanic regions. The climate and generally poor soils associated with it give rise to tropical savannah vegetation, with the size and volume of woody material present being closely related to rainfall and the quality of the forests decreasing strikingly as one proceeds inland from the northern coastline. In the north, cypress pine (which is termite resistant), ironwood, bloodwood and paperbark timbers are cut and milled for local building purposes. Further inland, particularly on the Barkly Tablelands and parts of the Victoria River district, there are better grazing grasses and some shrubs, while the wide belt of sandy plain between the Barkly Tableland and the ranges in the Alice Springs area carries mainly spinifex grass and low scrub. The plains of the Alice Springs district carry chiefly an acacia scrub known as mulga, spinifex and other sparse grasses. The principal families represented in the interior are *Gramineae*, *Chenopodiaceae*, *Compositae* and *Mimosaceae*.

### **Water**

The Northern Territory Government provides water and sewerage facilities in four of the five major centres—Darwin, Alice Springs, Katherine and Tennant Creek. In the other major centre, Nhulunbuy, the mining company North Australian Bauxite Company provides those services. Facilities are also provided for numerous Aboriginal communities and all smaller gazetted towns such as Pine Creek, Mataranka, Elliott and Finke. Facilities for the new Yulara Tourist Village near Ayers Rock are provided by the Yulara Corporation, and in Jabiru they are provided by the Jabiru Town Development Authority.

Darwin is served by the Darwin River Dam, some 70 kilometres from the city. The rockfill dam was completed in 1972. It is 30 metres high with a crest length of 564 metres, has an active storage of 230 million cubic metres and a safe draft of 90 megalitres a day. Studies are also being carried out to identify future sources to meet the growing needs of the Darwin region.

Katherine is supplied with treated water from the Katherine River, but with the proposed development of Tindal RAAF base near Katherine, feasibility studies are in progress to assess future supplies from various dam sites on the Katherine River system.

Alice Springs, Tennant Creek and all other towns and communities are supplied by bores from groundwater sources. Alice Springs has twenty production bores at Roe Creek. Tennant Creek has ten at Kelly Well and three at Cabbage Gum.

### **Soil conservation**

The Conservation Commission of the Northern Territory administers soil conservation and control legislation, undertakes resource inventories to assess land capabilities and conducts soil erosion works on behalf of the Government and the private sectors.

## **Population**

*See also* Chapter 6, Demography.

The estimated population of the Northern Territory at 30 June 1984, was 138,800 persons.

## **Aboriginal affairs**

### **Policy**

The Government is committed to policies of Aboriginal self-management at all levels. Involvement of Aboriginals in delivery and planning programs, and in all stages of the development and implementation of policy is paramount.

The basis of the Government's approach is to secure for Aboriginals access to government services equal to that accorded other Australian citizens, together with additional services appropriate to Aboriginals' state of extreme disadvantage, and, in recognition of a community obligation deriving from Aboriginals' past dispossession and dispersal.



### Legal status

As Australian citizens, Aboriginals are entitled to equality before the law. For the purpose of administering various programs designed to benefit Aboriginals, the Department of Aboriginal Affairs and other Commonwealth Government departments and agencies define an 'Aboriginal' or 'Torres Strait Islander' as a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives.

### Land and land rights

Aboriginals who are able to prove strong traditional links with unalienated Crown land may make a claim before the Aboriginal Land Commissioner, a judge of the Northern Territory Supreme Court. The *Aboriginal Land Rights (Northern Territory) Act 1976* requires the Land Commissioner, in hearing a claim to consider a number of matters in addition to traditional ownership before making a recommendation to the Minister for Aboriginal Affairs. The Minister can then accept or reject the Aboriginal Land Commissioner's recommendations.

Aboriginal land tenure, freehold or in the process of being granted freehold amounts to 457,980 square kilometres or 34 per cent of the Northern Territory. Leasehold land totals 26,074 square kilometres. Freehold titles to Aboriginal land are held by Aboriginal Trusts and the land is administered by Aboriginal Land Councils.

Minerals on Aboriginal land remain the property of the Crown. The Aboriginal Land Rights Act provides that mineral exploration can only proceed with the consent of the appropriate land council, which in turn must abide by the wishes of the traditional Aboriginal owners of the area concerned. Pre-existing mining interests were exempt from this requirement. In all cases where there is disagreement on terms and conditions the Minister for Aboriginal Affairs is able to appoint an arbitrator.

Royalties from mining on Aboriginal land are paid into an Aboriginals Benefit Trust Account and are distributed to pay administrative expenses of land councils, to communities affected by mineral developments and, on the recommendation of an advisory committee, to Aboriginal communities of the Northern Territory generally. Control of uranium mining has been reserved by the Commonwealth and special arrangements have been made between the Commonwealth and the Northern Territory Governments in relation to payments in lieu of royalties.



Transfer of Uluru National Park, Northern Territory to the traditional owners.

*Australian Information Service*

In August 1985, the Government announced an intention to amend the Aboriginal Land Rights Act on the basis of a preferred National Land Rights Model which the Government would like to see adopted in all States. This model proposes land claims to unalienated crown land on the basis of traditional entitlement, historical association, long term occupation and to meet specific needs. It would confer substantial rights in relation to mining on Aboriginal land but there would be no veto on exploration or mining.

Aboriginal communities are also being assisted to purchase land on the open market. The Aboriginal Development Commission, established in 1980, assist Aboriginal and Torres Strait Islander Communities, groups and individuals to acquire land for a variety of purposes, engage in business enterprises, obtain finance for housing and other personal needs, and to receive training where necessary.

#### **Community services and affairs**

Government policy in the administration of Aboriginal affairs is to encourage State and Commonwealth departments and instrumentalities to provide services to Aboriginal Australians as to other Australian citizens and to take measures to ensure that these services are appropriate, accessible and reflect the variety of Aboriginal life styles.

#### **Special programs for Aboriginals**

Attention is being given to changing the institutional character of Aboriginal communities in the Northern Territory. Assistance is designed to encourage and strengthen the capacity of Aboriginals to manage their own affairs, to increase their economic independence, and to reduce social handicaps facing them.

Government policy is to provide Aboriginal primary school children in Aboriginal communities with education in their own language as far as practicable. Bilingual education programs initiated in Northern Territory Aboriginal communities in 1973 now operate at 16 schools, using 12 Aboriginal languages. Aboriginal independent community schools, supported by the Government, also operate bilingual education programs.

Aboriginal legal aid services are supported by the Department of Aboriginal Affairs and operate to ensure that Aboriginals have access to legal advice and are represented in the courts.

### **Land tenure**

On 31 July 1984, 23,303,785 hectares were held under freehold title; 69,879,000 hectares under leasehold; 2,962,500 hectares under various licences; 26,927,100 hectares was Aboriginal land (held under the Aboriginal Land Rights Act); 69,385 hectares set aside for Government use; and 11,478,230 hectares unalienated. Land rent collected for the year 1983-84 amounted to \$500,553.

Following the report of the Aboriginal Land Rights Commissioner in April 1974, the Commonwealth Government introduced the *Aboriginal Land Rights (N.T.) Act 1976*. This Act which commenced on Australia Day, 26 January 1977 gives traditional Aboriginals inalienable freehold title to former Aboriginal reserves and some other land, amounting to approximately 19 per cent of the Northern Territory, and provides a procedure for them to claim title to other areas of unalienated Crown Land. On 31 July 1984, 26,692,400 hectares were designated as Aboriginal land under the Act, 18,673,600 hectares had been recommended as the result of claims, while claims were pending in respect of 17,754,800 hectares.

With the commencement of the *Crown Lands Amendment Act (No. 3) 1980* most existing leases in the Territory were automatically converted to freehold tenure making it the rule rather than the exception. Most Pastoral Leases and all Special Purposes Leases were excluded from automatic freeholding.

The various forms of lease or licence of lands are as follows:

- Pastoral leases —granted for periods not exceeding 50 years.
- Crown leases (Term) —granted for a term of years, and in majority of cases can be converted to freehold when developed.
- Crown leases (Perpetual)—granted in perpetuity.
- Special purposes leases —granted for a term of years or in perpetuity for purposes other than pastoral, agricultural or mining, or for private residential purposes within a town.
- Grazing licences —granted to graze stock on Crown Lands for periods not exceeding one year.
- Occupational licences —granted for manufacturing, industrial or any prescribed purposes for periods not exceeding five years.
- Miscellaneous licences —granted for periods not exceeding one year.

## Production

For further detail on production other than that listed below *see* those chapters of the Year Book dealing with particular subjects.

### Pastoral and agricultural industries

Beef cattle production is the major rural industry in the Northern Territory. The beef industry has been characterised throughout its history by a slow rate of expansion due mainly to the quality of pastures in the top end of the Territory, periodic droughts in the Alice Springs district and remoteness from large domestic markets and other market infrastructure. Although the rate of expansion has been slow it has been persistent. Significant developments in the last two decades include: the establishment of a beef road system; expansion of market outlets, including live animal exports to Malaysia and Brunei; introduction of tropical cattle breeds in the northern regions; continued private investment in water supplies, fences and yards; and development of low cost aerial mustering techniques. Export licenced abattoirs now operate in Alice Springs, Tennant Creek, Katherine, and Point Stuart and Mudginberri on the northern coast. The latter three abattoirs process both cattle and buffalo for export. The gross value of cattle production in 1983-84 is estimated to have been \$65 million.

In the Darwin district, the cattle industry has continued to be augmented by the buffalo meat industry. Interest in buffalo control has received a significant boost due to the recent development of a high-priced live export trade with Indonesia. Buffalo surplus to the live export trade requirements continue to be slaughtered predominantly for the West German market. The gross value of the buffalo industry in 1983-84 was of the order of \$5 million.

Both the cattle and buffalo industries of the Northern Territory are experiencing dramatic changes in management practices due to a campaign to eradicate brucellosis and tuberculosis from the herds. The campaign requires all stock to be manageable to the extent where a 100 per cent efficient muster can be carried out and so controlled stock are segregated and protected from possible infection by non-controlled stock.

In 1980 the Agricultural Development and Marketing Authority (ADMA) was established to develop broadacre cropping industries to the point where export sales were viable. The ADMA has developed six project farms in the Douglas-Daly basin, 250 kilometres from Darwin. These farms provide a commercial environment for the development of the required levels of agronomic and economic efficiency. ADMA operates as the handling and marketing authority for these and other non-project farmers in the Territory. Grain handling depots have been established at Katherine and Douglas-Daly. Gross value of production in 1984-85 was \$1.5 million.

The horticultural industry in the Northern Territory has experienced very rapid expansion over the last four years. Value of production has increased from just over \$200 000 in the early 1980s to in excess of \$3.5 million in 1984-85. Very significant plantings of mangoes are as yet immature. The value of mango production is predicted to be in excess of \$10 million by 1990 and will continue to expand thereafter. Commercial trials of cashew production are being undertaken and it is expected that these will be the forerunner for a \$5 million industry. The top end of the Northern Territory has a natural advantage for horticultural production due to its capacity to produce the earliest maturing product in Australia for many lines of tropical fruit and vegetables. Table grape production in the Alice Springs district enjoys a similar advantage.

NORTHERN TERRITORY: NUMBER, AREA AND LAND UTILISATION OF AGRICULTURAL ESTABLISHMENTS

	Number of agricultural establishments	Area used for crops (a)	Area under sown pastures and grasses	Balance of area (b)	Total	
					Area	Percentage of N.T. land area (134,620,000 hectares)
				'000 hectares		
1979-80 . . . . .	346	1.8	99.0	78,066.8	78,167.7	58.1
1980-81 . . . . .	350	1.4	87.1	77,500.4	77,588.7	57.7
1981-82 . . . . .	300	2.0	55.6	77,078.0	77,135.6	57.3
1982-83 . . . . .	287	3.4	43.9	75,202.2	75,249.5	55.9
1983-84 . . . . .	283	5.2	32.6	71,627.9	71,665.7	53.2
1984-85p . . . . .	262	4.3	44.0	73,717.2	73,765.6	54.8

(a) Excludes duplication on account of area double cropped.

(b) Used for grazing, lying idle, fallow, etc.

## NORTHERN TERRITORY: AGRICULTURAL STATISTICS

	Unit	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 <sup>p</sup>
<b>Livestock numbers—</b>							
Cattle . . . . .	'000	1,727.2	1,675.4	1,624.4	1,547.7	1,390.1	1,460.8
Domesticated buffaloes . . . . .	'000	3.8	5.5	1.2	n.a.	n.a.	n.a.
Poultry . . . . .	'000	n.a. (a)	n.a. (a)	n.a. (a)	165.8	221.9	223.7
Pigs . . . . .	'000	2.3	3.2	2.5	2.1	2.8	3.0
<b>Gross value of livestock slaughterings and other disposals—</b>							
Cattle and calves . . . . .	\$'000	121,494	56,852	58,604	63,016	80,141	89,278
Poultry . . . . .	\$'000	n.a. (a)	n.a. (a)	n.a. (a)	n.a. (a)	n.a. (a)	n.a. (a)
Pigs . . . . .	\$'000	488	523	567	630	570	n.a. (a)
<b>Gross value of livestock products—</b>							
Dairy products . . . . .	\$'000	86	n.a. (a)	n.a. (a)	n.a. (a)	n.a. (a)	n.a. (a)
Eggs . . . . .	\$'000	1,395	1,757	2,500	2,822	3,001	n.a. (a)
<b>Crops, Area—</b>							
Sorghum (grain and feed) . . . . .	Hectares	653	850	1,016	2,705	2,810	2,062
Hay . . . . .	Hectares	367	8	—	10	284	55
Tree fruit . . . . .	Hectares	16	15	17	18	406	431
Bananas . . . . .	Hectares	13	13	19	30	27	26
Vegetables . . . . .	Hectares	145	110	98	93	193	293
Pastures and grasses (hay, seed, green feed) . . . . .	Hectares	1,617	2,974	5,827	8,247	6,292	7,751
Total area used for crops (incl. pastures and grasses) . . . . .	Hectares	3,549	4,410	7,867	11,636	11,458	11,316
<b>Crops, Production—</b>							
Sorghum for grain . . . . .	Tonnes	1,011	496	818	2,876	5,725	4,814
Hay . . . . .	Tonnes	1,396	4	—	42	1,150	748
Bananas . . . . .	Tonnes	101	60	87	82	556	n.y.a
Pastures and grasses (hay, seed) . . . . .	Tonnes	3,858	7,212	12,553	5,986	5,509	
<b>Gross value of crops—</b>							
Sorghum for grain . . . . .	\$'000	104	69	115	426	381	3,334
Fruit . . . . .	\$'000	85	75	80	77	64	701
Vegetables . . . . .	\$'000	333	297	231	265	283	594
Pastures and grasses . . . . .	\$'000	330	424	718	866	777	1,277
Total crops (incl. pastures and grasses) . . . . .	\$'000	1,098	1,908	2,133	2,294	1,948	7,720
Gross value of agriculture . . . . .	\$'000	124,561	62,355	64,488	68,758	85,660	96,998

(a) Not available for publication. Excluded from totals.

**Mining**

The value of mineral output continued its rapid growth of recent years from \$437 million in 1980 to \$872 million in calendar year 1984. The most important single factor to account for increases in value of production was yellowcake production at Nabarlek and Ranger. Uranium accounts for 44 per cent of the total value of minerals produced in 1984.

The principal mining areas are the Alligator Rivers region for uranium; Gove Peninsula for bauxite/alumina production, Groote Eylandt for manganese and Tennant Creek for copper and gold.

## NORTHERN TERRITORY: MINING ESTABLISHMENTS

		1981-82	1982-83	1983-84
Establishments operating end of June . . . . .	No.	14	14	17
Average employment over whole year—persons (a) . . . . .	No.	1,773	1,566	1,622
Wages and salaries . . . . .	\$m	37.4	40.3	47.4
Turnover . . . . .	\$m	344.6	521.9	542.0
Opening stocks at 30 June . . . . .	\$m	79.8	142.3	150.4
Closing stocks at 30 June . . . . .	\$m	128.7	165.6	171.2
Purchases, transfers in and selected expenses . . . . .	\$m	85.0	90.5	108.3
Value added (b) . . . . .	\$m	308.5	454.6	454.5
Fixed capital expenditure (c) . . . . .	\$m	58.8	9.8	24.2

(a) Includes working proprietors. (b) Turnover plus increase (or less decrease) in the value of stocks less purchases, transfers in and selected expenses. Commencing with 1978-79, 'rent, leasing and hiring revenue' and 'rent, leasing and hiring expenses' have been included in the calculation of value added and its components 'turnover' and 'purchases, transfers in and selected expenses'. (c) Outlay on fixed tangible assets less disposals.

### Petroleum and natural gas

Expenditure on offshore and onshore exploration was \$45.3m in 1982, \$54.5m in 1983 and \$57.0m in 1984. In September 1983 a 148 km natural gas pipeline from the Palm Valley field to Alice Springs power station was completed. Appraisal testing and drilling took place on the Mereenie oil-field during 1982 and 1983. Production at 1800 BPSD started in September 1984 and a fractionation plant at Alice Springs and oil pipeline to feed it are now in operation.

The natural gas pipeline from the Amadeus Basin to Darwin commenced construction in 1985 and will bring about a change in Territory power generation from coal to gas-fired electricity. The gas will fire the new Channel Island power station to be built near Darwin and targeted for completion in December 1986.

### Forestry

Forestry activities in the Northern Territory commenced in 1959 under the Forestry and Timber Bureau; later a State-type service was developed under the Department of the Northern Territory.

In July 1978, with the granting of self-government, Forestry became the responsibility of the Territory Parks and Wildlife Commission, now the Conservation Commission of the Northern Territory.

Present activities fall into four main areas: Urban Forestry, Plantation Forestry, Native Forest Management and Conservation.

The Urban Forestry section is aimed at improving the urban environment throughout the Northern Territory through programs of park and street beautification and arid area species testing.

The Plantation Forestry section is predominantly based on plantation establishment on more favourable sites on Melville Island and is ultimately aimed at import replacement. The major species in use is *Pinus caribaea*, though early plantings were largely cypress pine. A small pressure treatment plant providing treated round timber is operated by the Aborigines on nearby Bathurst Island.

Management of native forest is currently confined to the Murganella area of Arnhem Land where a policy of protection from fire has resulted in extensive regeneration of cypress pine and native hardwoods, *Eucalyptus tetradonta* and *E. nesophila*. Current research in this area is aimed at development of sound management prescriptions for treatment of this regeneration.

In its conservation role, the Conservation Commission has given emphasis to fire and ecological studies throughout the Territory together with seed collection, testing and propagation, and gene pool conservation of rare or unique species.

### Fishing

Seafoods landed in the Northern Territory in 1984-85 totalled 4,137 tonnes and had an estimated value of \$17.21m. Prawn fishing continues to dominate the industry with 2,154 tonnes being landed worth an estimated \$13.84m. Barramundi remains the second most important species fished. Landings stood at 636 tonnes and were valued at \$1.74m. In order of estimated landed value threadfin salmon, mackerel, mud crabs, shark, bay lobster, squid, scallops and reef fish are the next most important species taken.

Management control measures have been introduced in the prawn, barramundi and mud crab fisheries in order to prevent over-exploitation of these fisheries resources.

Taiwanese fishing vessels operated in northern Australia waters in 1983-84 under bilateral and joint venture foreign fishing agreements with the Commonwealth. These vessels received a catch quota allocation of 27,500 tonnes of demersal species and 6,750 tonnes of pelagic species for the year. Australian fishermen are being encouraged to participate in the harvesting of these previously under-utilised offshore demersal and pelagic fisheries resources.

#### NORTHERN TERRITORY: PRINCIPAL FISHERIES

		1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
Prawns—							
Estimated gross weight of prawn catch . . . . .	tonnes	3,147	4,259	2,986	2,402	2,462	2,154
Gross value of prawns . . . . .	\$'000	14,900	17,067	15,250	15,692	17,587	13,837
Fish—							
Estimated live weight of fish catch . . . . .	tonnes	1,352	1,634	1,897	1,694	1,562	1,782
Gross value of fish . . . . .	\$'000	1,791	2,267	2,944	3,232	2,584	2,800

### Secondary industries

The types of secondary industries that have developed in the Northern Territory have been largely based on demand from the local markets, some processing of primary production for exports including the processing of mined ores and beef together with exports in the mining and construction industries.

The isolation of the Northern Territory from the major population areas of Australia and resultant high transportation costs make other than local market expansion difficult.

While industry is limited to local markets, industrial expansion will be small. However determined efforts are being made to take advantage of the proximity of Darwin to the rapidly expanding South East Asian markets. It is envisaged that in the longer term secondary industry will be largely export based.

The following table shows results of the Manufacturing Censuses taken in respect of the years 1981-82 to 1983-84.

NORTHERN TERRITORY: MANUFACTURING ESTABLISHMENTS

	Unit	1981-82	1982-83	1983-84
Establishments at 30 June . . . . .	No.	106	117	115
Persons employed (a) . . . . .	No.	2,489	2,434	2,432
Wages and salaries . . . . .	\$m	42.5	45.2	49.3
Turnover . . . . .	\$m	296.9	343.9	358.7
Opening stocks at 30 June . . . . .	\$m	83.1	82.9	76.5
Closing stocks at 30 June . . . . .	\$m	78.2	81.3	76.6
Purchases, transfers in and selected expenses . . . . .	\$m	230.9	251.3	248.6
Value added . . . . .	\$m	61.2	91.0	110.2

(a) Average over whole year. Includes working proprietors.

### Tourism, parks and reserves

Tourism is second only to mining as the Territory's most important industry with direct earnings for 1984-85 estimated at \$281 million, an increase of 63.4 per cent over the previous year.

A visitor growth rate of 15.6 per cent with visitor expenditure increasing from \$85 million in 1977-78 at an average rate of 8.9 per cent continues to encourage investment in tourism facilities.

The Northern Territory Tourist Commission took over from the Northern Territory Tourist Board in 1980 and since then has expanded its operations worldwide. It has its head office in Alice Springs, a regional office in Darwin and bureaux in Adelaide, Hobart, Melbourne, Sydney, Parramatta, Perth, Canberra, Brisbane, as well as in Los Angeles, Frankfurt, Tokyo, Singapore and London.

Its budget for 1985-86 is \$10.8 million.

There are 53 parks and reserves, covering about 5,800 square kilometres, under the care, control and management of the Conservation Commission of the Northern Territory. The Commission's functions include the preservation and protection of natural and historical features and the encouragement of public use and enjoyment of land set aside under its control.

In addition, the Cobourg Peninsula National Park (2,207 square kilometres) is managed by the Cobourg Peninsula Sanctuary Land Trust, and the Kakadu National Park (15,923 square kilometres) is managed by the Australian National Parks and Wildlife Service. Uluru National Park (Ayers Rock—Mt. Olga) is managed by the Australian National Parks and Wildlife Service in conjunction with the park's traditional Aboriginal owners.

### Transport and communication

#### Railways

Passenger and freight train services commenced in December 1980 over the then new 831 km standard gauge Tarcoola-Alice Springs railway. Direct services from Sydney to Alice Springs commenced in 1984.

#### Roads

The Stuart Highway is the principal north-south axis route for the Northern Territory connecting Alice Springs, Katherine, Tennant Creek and Darwin to Adelaide. The section Darwin-Alice Springs is 1,486 kilometres long and sealed over its full length. The section south of Alice Springs is sealed to the South Australian border, a distance of 292 kilometres.

The Barkly Highway is the principal route to and from Queensland via Mount Isa. It is 648 kilometres long, 444 kilometres of this being within the Territory, and is sealed. Running approximately east-west, it connects to the Stuart Highway some 26 kilometres north of Tennant Creek.

The Victoria Highway, the principal access route to and from Western Australia via Kununurra, is 468 kilometres from Katherine to the Northern Territory border and is sealed.

These highways are used to carry a variety of freight, including cattle, particularly between the railheads at Mount Isa and Alice Springs. They provide access to meatworks at Wyndham (Western Australia), Cloncurry (Queensland) and Katherine. In addition, they play a particularly important part in the Northern Territory economy through their association with the tourist industry.

The program for upgrading the Stuart and Barkly Highways was commenced in the early 1970's and the ongoing program is continuing to bring these roads to National Highway Standards.

### **Shipping**

Shipping services to Darwin are provided from Western Australia by Stateships using two multi-purpose, roll on-roll off vessels (Pilbara and Koolinda). Both services are on a fortnightly basis. Tankers from Australian and overseas ports deliver oil products to Darwin. General cargo vessels from overseas ports also visit Darwin. The prawning and fishing industry accounts for a significant portion of the shipping entries into the port.

A regular shipping service which serves Aboriginal communities as well as the mining centres of Melville Bay (Gove) and Milner Bay (Groote Eylandt) operates from Brisbane to the Gulf of Carpentaria ports. Bulk carriers load ore and other mining products for delivery to ports in Australia and overseas.

Two Darwin-based companies operate landing craft to Aboriginal communities and ports along the coast. The vessel, Frances Bay, is involved in overseas trade from Darwin to Singapore and other South East Asian ports.

### **Air services**

At 1 September 1985 there were 81 licensed aerodromes plus 4 Commonwealth controlled airports in the Territory. Qantas operates a weekly international service from Darwin to Singapore whilst Garuda Indonesian Airways provides a twice weekly service to Den Pasar (Bali) and Royal Brunei Airlines to Brunei (Bandar Seri Begawan). Regular services to Darwin with intermediate stops at some Territory centres are operated by Trans Australian Airlines and Ansett Airlines of Australia from mainland capital cities and by Ansett Western Australia from Western Australia. Ansett Northern Territory commenced operations in 1981 and provide a network to all major Territory centres. The Northern Territory Aerial Medical Service has aircraft based at Darwin and Gove while the Royal Flying Doctor Service operates from Alice Springs. Regular commuter services operate from Darwin, Katherine, Gove and Alice Springs to outlying centres. Charter services are available at Darwin, Alice Springs, Gove, Groote Eylandt, Katherine, Tennant Creek, Ayers Rock and Jabiru. Responsibility for the economic licensing of domestic operations passed from the Commonwealth to the Northern Territory Government on 1 June 1980. The Commonwealth Government retains responsibility for safety and operational aspects and works closely with Territory authorities in the licensing of commercial operations within the Territory.

Several organisations provide helicopter services particularly for cattle mustering and aerial survey. In 1981 heavy helicopter activity from Darwin increased in support of offshore drilling rigs involved in oil and gas exploration.

Civil aircraft under contracts to the Department of Transport, Australia, operate on extensive coastal surveillance operation from Darwin.

### **Post, telegraph, telephone, radio and television**

Postal communication is maintained by daily air transport between major Northern Territory centres and the capital cities of Australia. Large centres receive surface mails by two major road mail services operating from Queensland and South Australia. More remote centres are served by aerial services. Direct mail despatches are exchanged between Darwin and several overseas countries.

Trunk telephone links to Darwin extend from Townsville via a broadband microwave radio relay system, and from Adelaide via systems operated over leased circuits on the NAR Tarcoola-Alice Springs microwave link. These systems also carry telegraph and data traffic

and serve towns along the routes. Subscriber trunk dialling facilities were introduced to Darwin, Nhulunbuy (Gove Peninsula) in 1974 and to Katherine in 1975. ISD (International Subscriber Dialling) was introduced to telephone exchanges in the Darwin area and to Katherine and Nhulunbuy in December 1976. Tennant Creek and Elliott telephone services were connected to automatic with subscriber trunk dialling facilities during 1979.

Completion of Australia's first solar-powered broadband microwave relay system between Tennant Creek and Alice Springs in October 1979 brought subscriber trunk dialling and ISD facilities to Alice Springs. It also provides live television programs to the National Television Service transmitter at Alice Springs.

The automatic conversion program in the Northern Territory is now complete and all services are provided with direct dialling facilities and access to STD. High frequency radio telephone exchanges at Katherine and Alice Springs provide connections to the telephone network for some of the remote properties in the Northern Territory. The majority of homesteads on pastoral leases are equipped with radio transceivers operating through the Royal Flying Doctor base at Alice Springs or the Telecom Australia Outpost Radio base in Darwin which provide a message passing and emergency communications service. A number of homesteads and settlements adjacent to the Darwin-Isa and Tennant Creek-Alice Springs microwave corridors are provided with VHF radio telephone giving 24 hour service with STD facilities.

Telecom's major thrust in the Northern Territory is an extension of the network to outback areas, scheduled for completion by 1990. During 1984 automatic telephone exchanges were installed at Yulara and Groote Eylandt complete with STD and ISD access. Utilisation of new technology such as the Australian-developed Digital Radio concentrator system and the domestic satellite will bring world standard telephone service to all customers, however isolated.

Regional national broadcasting stations are situated at Darwin, Alice Springs, Tennant Creek, Katherine, Jabiru and Gove. Darwin is also served by a national broadcasting ABC-FM station. Commercial broadcasting stations are located at Darwin, with a translator to serve Katherine, and at Alice Springs. Two television stations, ABD Channel 6 of the national broadcasting system and commercial station NTD Channel 8 operate in Darwin. The Darwin ABD 6 program is also broadcast in Katherine (ABKN 7) and Tennant Creek (ABTD 9) with translators serving Adelaide River, Bathurst Island, Mataranka, Newcastle Waters/Elliott and Warrego Mine. Alice Springs is served by national television station, ABAD Channel 7 with a translator serving Santa Teresa. Remote area television is provided via satellite earth stations and associated translators at Borroloola, Daly River, Galiwinku, Groote Eylandt, Jabiru, Ngukurr, Nhulunbuy, Numbulwar, Port Keats, Pularumpi, Yirrkala and Yulara.

## Education

*See also* Chapter 12, Education.

Responsibility for education in the Northern Territory was transferred from the Commonwealth Department of Education to the Northern Territory Government on 1 July 1979.

Since that date education services have been provided by the Northern Territory Department of Education.

Details of the responsibilities are outlined in the *Northern Territory of Australia Education Act 1979*. Under the Act, the Minister for Education is responsible for the general administration and control of education services. The Act states that the Minister may take all measures which, in his opinion, are necessary or desirable to assist parents of children in the Territory in fulfilling the responsibility to educate their children according to the individual needs and abilities of those children; to make education services, provided by him, available to all people in the Territory; and to assist all people of the Territory with their own education. The Act also provides for the establishment of Advisory Councils.

### Schools in the Northern Territory

At 7 June 1985 there were 151 schools in the Northern Territory with a total school population of 34,193. Of that number 4,020 attended 12 private schools and 1,142 attended mission schools. Approximately 10,133 students were of Aboriginal descent. In addition to primary and pre-schools, there are 11 government high schools, one secondary correspondence school and three private high schools. There are three area schools offering secondary courses and two residential colleges for Aboriginal students. There are also 16 government schools in



Aboriginal communities that offer post-primary courses and six mission schools with post-primary programs.

Teaching staff are provided by the Northern Territory Teaching Service and qualified applicants are recruited from all parts of Australia.

With the exception of Year 12 level, where most students are assessed by the Senior Secondary Assessment Board of South Australia, all aspects of curriculum, course accreditation and student assessment are the responsibility of the Northern Territory Board of Studies, with subject area committees in English, Languages other than English, Mathematics, Science, Computer Education, Social and Cultural Education, The Arts, Health and Physical Education and Life/Work Skills. Apart from Life/Work Skills, which is concerned with secondary education only, all committees span primary and secondary education from Transition to Year 12.

Subject area committees define the core of essential skills and understandings in which all students should gain competence and the educational experiences which they should have during their primary and junior secondary schooling. They also identify or develop the recommended curricula, which consists of those courses and materials which are regarded as the best available to schools to assist in achieving the objectives specified in the core, as well as skills, understandings, content and experiences considered appropriate for extension beyond the core.

In addition to curriculum development, subject area committees provide for guidelines on the assessment of student performance, examples of assessment instruments and, in some subjects, moderation of student assessment. The Junior and Senior Secondary Studies Certificates are issued by the Northern Territory Board of Studies at Year 10 and Senior levels respectively.

The work of subject area committees is co-ordinated and supplemented by curriculum officers at central and regional levels and by a range of educational services.

The two Schools of the Air in the Northern Territory, one at Katherine and one at Alice Springs, have developed individual programs and provide correspondence and radio lessons for students in the years One to Seven. One correspondence school caters for isolated secondary students. Aerial and road patrols are carried out regularly to provide teacher/student and parent contact.

Special schools are located in Alice Springs and Darwin for handicapped children. However, where appropriate, students with special needs are integrated into primary and secondary schools. Guidance and Special Education Advisory services operate from the two Regional Offices in Alice Springs and Darwin.

A program of exchange between Indonesia and the Northern Territory is continuing in which up to two teachers from each country are exchanged for a school year, and four senior students spend up to six months in each country. In addition the Northern Territory Department of Education encourages school-organised excursions to Bali and other South-East Asian locales.

### **Aboriginal education**

Most Northern Territory Aboriginals live away from town centres and their education is provided in various settings including mission schools, government schools on or near Settlements or Aboriginal townships, on pastoral properties and outstations or homeland centres.

There has been an increasing number of requests from outstations for the Department of Education to provide assistance. A small group of teachers is currently working in this field and developing special methods and modified courses to help overcome the difficulties faced by isolated outstation groups in their quest for education.

Government schools for Aboriginal children in out-of-town centres provide tuition at pre-school and primary school level with a number of them providing post primary (secondary age) classes as well.

For Aboriginal children who wish to proceed to secondary schools there are now two residential colleges: Yirara and Kormilda. These colleges are regionally based but situated near urban centres, Yirara at Alice Springs and Kormilda in Darwin. They provide secondary age students from outlying centres with the opportunity to undertake a range of courses at an urban high school.

Bilingual education programs in Northern Territory schools in Aboriginal communities have attracted wide interest from within Australia and overseas. There are 16 schools offering bilingual programs to approximately 3,500 students. Many other schools include Aboriginal

language and culture in the curriculum. Fourteen languages are now being used in the program and 6 further languages are under consideration. Many school children are acquiring initial literacy skills in their own language. Half of the curriculum is devoted to instruction in an Aboriginal language, and during the other half a structured English course forms an integral part of the bilingual program. Other aspects of Aboriginal education are covered in the TAFE section.

#### **Technical and Further Education (TAFE)**

Technical and further education services in the Northern Territory are provided by the Darwin Institute of Technology and the Department of Education through its Institute of Technology and Further Education. The Darwin Institute of Technology is a multi-level institution and has a direct responsibility to provide TAFE services in the Darwin area.

The Department of Education became the TAFE authority for the Northern Territory on 31 December 1984 when this function was transferred from the Vocational Training Commission. A TAFE Advisory Council, serviced by the Department of Education, has been established to advise the Minister for Education on Territory-wide TAFE policy issues. The Council membership includes representatives of employer and employee organisations, and Northern Territory TAFE colleges.

The TAFE Division provides services through:

*Adult Education and Training Branch.* Most large Aboriginal communities have an adult educator who relates to the adults of the community and arranges education and training programs which the Adult Educator or local part time instructors and visiting lecturers teach. Communities are seeking skills training that will help them in the management of their own affairs as well as providing employment mobility. There is thus a rapidly growing demand for these services.

*Darwin Institute of Technology.* The Institute was opened in 1974 as the Darwin Community College and redesignated the Darwin Institute of Technology in 1985. It is an autonomous multi-level institution offering over one hundred award programs in both advanced education and technical and further education, and a wide range of non-award recreational and continuing education programs.

The tropical campus comprises 58 hectares situated at Casuarina in Darwin's northern suburbs, 13 km from the city centre, and the School of Australian Linguistics campus is situated at Batchelor.

Advanced education programs are offered at degree, post-graduate diploma, diploma and associate diploma level. Technical and further education programs are offered at certificate, trade certificate, post-trade certificate and apprenticeship trade course level.

The Institute also provides examination facilities and some tutorial assistance to external students in the Northern Territory studying at other Australian Institutions, through the NT External Studies Centre at the Casuarina campus. International programs are offered through the School of Extension Services.

Total enrolment in award programs in 1985—4,875. Annual enrolment in non-award programs—4,500.

*Community College of Central Australia.* The Community College of Central Australia is a multi-sector, multi-campus institution situated in Alice Springs. As the name implies, it services a vast area of Central Australia, providing recreational, remedial, pre-trade, trade, first trade and para-professional studies to the community. Graduate studies, through a number of Australian institutions, are serviced by the External Studies Section of the College.

The College has four campuses in Alice Springs with an annexe developing as a TAFE centre in Tennant Creek. The College has been established for five years, showing a rapid growth in responding to its community's increasing demands and confidence. An increase of current student enrolments to 3,000+ is anticipated for 1985 as existing courses are further developed and new areas are piloted.

*Katherine Rural College.* The Katherine Rural College is a technical and further education institution established to train people for employment in the Northern Territory rural industry. It offers a one year and a two year full-time certificate course in rural studies and short courses such as Plant Operation, Water Conservation and Use, Helicopter Mustering and Horse Shoeing are conducted by the College. The College has residential facilities for students and staff and a 3,440 hectare property ideally located for studies in a wide variety of agricultural and pastoral activities.

The College is expanding rapidly in response to industry needs since teaching began in 1979. It is strongly supported by the Northern Territory Government, an active Advisory Council and pastoral/farming organisations.

*Batchelor College.* Batchelor College is a residential institution providing programs for Aboriginal people which lead in particular to teacher-education qualifications at advanced education and TAFE levels. Courses related to community management are also offered to students at the College. The College itself is situated at the township of Batchelor.

## Health

In January of 1979, the Northern Territory Government assumed the Commonwealth's prior responsibility for the provision of the Territory's health services.

Hospitals are located at Darwin, Alice Springs, Katherine, Tennant Creek and Nhulunbuy.

Schools of general and midwifery nursing are operated at Royal Darwin Hospital whilst a training school for enrolled nurses is conducted at Alice Springs Hospital. In 1987, the Basic Nursing Education Program will transfer to the Darwin Institute of Technology.

The Menzies School of Health Research was established in 1983 by the NT Government, supported by the Menzies Foundation. In co-operation with the NT Department of Health, the School is working to improve the health of Territorians through its programs of research and post-graduate education, and through several community based initiatives.

In the urban areas of Darwin, Katherine, Tennant Creek, Alice Springs and Nhulunbuy, community health centres have been established to provide a full range of community and public health services. A number of rural health centres have also been established in smaller communities, providing a range of services appropriate to the size and nature of the community concerned,

Dental clinics are located in the main urban centres and are progressively being extended to the smaller communities. Rural areas are serviced regularly by mobile teams from the urban centres. The school dental service now covers all pre school and primary school children in urban areas and is being extended to rural areas through the District Dental Officer program and the increasing involvement of aboriginal health workers in the program. An oral health program has been established at secondary schools to complement the primary schools service.

The Aerial Medical Service operates in all areas of the Northern Territory using a combination of charter, and commercially scheduled services, Royal Flying Doctor Service, and Government owned Nomad aircraft.

Health services to Aboriginal communities are provided by departmental staff, doctors, nurses and aboriginal health workers either directly employed by the Department of Health or through grants-in-aid.

The training of aboriginal health workers is carried out at the Katherine Institute for Aboriginal Health and training schools in Nhulunbuy and Alice Springs. Both basic and post basic modules in aboriginal health worker training are now available.

Extended care services incorporate assessment, rehabilitation, day care, long-stay residential and respite care and domiciliary care for the aged and those of all ages with a disability of a permanent or indefinite duration.

A public health service is provided throughout the Territory by Health Surveyors located in the major urban areas who make regular visits to outlying areas. In Alice Springs, the Health Surveyor Service is the responsibility of the Alice Springs Town Council.

The Northern Territory Drug and Alcohol Bureau services the Northern Territory Drug and Alcohol Advisory Committee and its associated regional drug and alcohol groups. The Bureau co-ordinates the activities of the many Government and non-Government organisations which have a role in the control of drug and alcohol problems in the Northern Territory, making policy recommendations to these bodies.

Other services provided are the conduct of drug education programs and a program of mosquito control and research aimed at prevention of outbreaks of Australian Encephalitis. Both of these activities are subsidised by the Commonwealth Government.

## Finance

The following table gives details of government revenue and outlays that have been identified as relating specifically to the performance of local or State-type functions in the Northern Territory from 1980-81 to 1982-83. Receipts collected in the Northern Territory from Australia-wide sources (e.g. income taxes, customs duties, etc.) and outlays in the Northern Territory on items of a national character (e.g. defence, civil aviation and cash benefits paid to Northern Territory residents as part of national programs) are *not* included.

In addition to transactions relating to the Northern Territory in the Consolidated Revenue Fund and certain trust funds the transactions of the following public corporations are included: Northern Territory Port Authority, Northern Territory Housing Commission, Northern Territory Electricity Commission, Jabiru Town Development Authority, Corporation of the City of Darwin, Corporation of the Municipality of Alice Springs, Corporation of the Municipality of Katherine and Corporation of the Municipality of Tennant Creek.

### NORTHERN TERRITORY: OUTLAY AND REVENUE

(\$ million)

	1980-81	1981-82	1982-83
<b>OUTLAY</b>			
Final consumption expenditure—			
Public order and safety . . . . .	40.4	47.6	51.8
Education . . . . .	81.3	95.5	109.6
Health . . . . .	68.5	71.5	72.4
Social security and welfare . . . . .	6.6	6.6	6.8
Other . . . . .	137.9	179.6	226.0
Expenditure on new fixed assets—			
Education . . . . .	11.5	17.8	16.9
Road transport . . . . .	54.7	55.1	48.3
Housing and community development . . . . .	33.8	45.5	33.7
Health . . . . .	3.1	2.9	2.4
Social security and welfare . . . . .	0.5	0.1	0.1
Electricity and other energy . . . . .	5.3	13.1	14.9
Other . . . . .	61.8	47.9	57.9
Expenditure on secondhand fixed assets (net) . . . . .	6.0	4.9	1.8
Expenditure on land and intangible assets (net) . . . . .	10.8	4.7	17.9
Increase in stocks . . . . .	1.8	1.8	0.7
Interest paid . . . . .	24.8	34.4	42.8
Personal benefit payments . . . . .	0.6	0.8	0.9
Subsidies . . . . .	45.6	48.2	63.7
Net advances to the private sector . . . . .	47.9	50.1	51.1
Grants to non-profit institutions—current . . . . .	30.2	34.3	37.1
Grants to private sector and public financial enterprises—Capital . . . . .	0.6	0.6	0.6
<b>Total Outlays . . . . .</b>	<b>673.7</b>	<b>763.0</b>	<b>857.4</b>
<b>REVENUE</b>			
Taxes, fees and fines . . . . .	41.0	49.7	56.9
Property income . . . . .	25.1	27.7	34.3
Net operating surpluses of public trading enterprises . . . . .	2.2	0.8	18.2
Commonwealth Government grants and advances . . . . .	551.7	619.6	717.9
Net borrowing . . . . .	34.2	35.2	45.9
Other receipts . . . . .	19.4	30.1	-15.8
<b>Total Receipts . . . . .</b>	<b>673.7</b>	<b>763.1</b>	<b>857.2</b>

## THE AUSTRALIAN CAPITAL TERRITORY

### General description

The Constitution provides that the Seat of Government of the Commonwealth of Australia shall be in the State of New South Wales but distant not less than 160 kilometres from Sydney. After a number of alternative sites were considered, an area of 2,359 square kilometres lying approximately 320 kilometres south-west of Sydney was transferred to the Commonwealth as from 1 January 1911. A further 73 square kilometres at Jervis Bay were transferred as from 4 September 1915 to serve as a port for the Territory.

The primary responsibility for administering the Australian Capital Territory lies with the Department of Territories and Local Government, whose functions include the leasing and management of land, housing, public transport, forestry and municipal services. Education, public health and justice are the responsibilities of the Department of Education, the A.C.T. Health Authority and the Attorney-General's Department respectively. The National Capital Development Commission has the responsibility for the planning and development of the Canberra city area.

In 1974, the A.C.T. Advisory Council, which had been in existence since 1930, was replaced by the A.C.T. Legislative Assembly. The first Assembly was elected on 28 September 1974 and held its first meeting on 28 October 1974.

During 1979, the name of the A.C.T. Legislative Assembly was changed to the A.C.T. House of Assembly. The first election for the House of Assembly was held on 2 June 1979 and first meeting of the House of Assembly was held on 29 June. The Assembly is established by the *House of Assembly Ordinance 1936* which defines its role as follows:

'The Assembly may advise the Minister for Territories in relation to any matter affecting the Territory including the making of new Ordinances or the repeal or amendment of existing Ordinances.'

The Assembly consists of 18 Members (9 from each of the electoral divisions of Canberra and Fraser) and its procedure is modelled on that of the House of Representatives. Its Members serve on a part-time basis.

The Assembly normally considers (and sometimes introduces) Ordinances which are proposed for the Territory. It also passes resolutions on matters affecting the Territory. It is represented on a number of boards, authorities and committees such as the Canberra Commercial Development Authority, the A.C.T. Electricity Authority, the A.C.T. Schools Authority, the Gaming and Liquor Authority, the Consumer Affairs Council and the Australian Constitutional Convention.

At 30 December 1984, the population of the Australian Capital Territory was 247,600. See also Chapter 6, Demography.

### Housing

The role of the Department of Territories in the area of Housing has changed significantly since 1930 when, as the Department of the Interior, it offered rental accommodation to public servants in Canberra. The proportion of houses and flats in the Australian Capital Territory occupied by tenants of the Department of Territories has fallen steadily from 79.7 per cent of total occupied houses and flats in 1954 to 58.3 per cent in 1961, 28.1 per cent in 1971, 13.3 per cent in 1981, and 10 per cent in 1983. This proportion rose to 13.0 per cent in 1984, and has fallen slightly to 12.9 per cent in 1985.

Although there has been a considerable increase in the proportion of home ownership in the Australian Capital Territory since 1954, the demand for public housing has continued to increase. At June 1979 there were 363 persons on the waiting list for public housing. There were 1,238 in 1980; 2,126 in 1981; 1,554 in 1982; 1,757 in 1983; 2,141 in 1984; and 2,756 in 1985. Housing resources have not been able to keep pace with the demand; therefore rental accommodation and housing finance are now allocated on a means tested basis.

The Department of Territories in conjunction with the National Capital Development Commission has endeavoured to expand public housing stock through annual building programs. The 1984-85 building program provided for the commencement of 650 dwellings and it is expected that 500 dwellings will be commenced in 1985-86.

Both private and public home building activity have continued to expand the stock of residential dwellings in the Australian Capital Territory. At June 1985 there were 22,436 occupied dwellings in the Central Canberra area; 19,633 in the Woden Valley and Weston

Creek area; 23,960 in the Belconnen area; 13,242 in the Tuggeranong area; and 115 elsewhere in the Australian Capital Territory. The total number of occupied dwellings in the Australian Capital Territory at June 1985 was 79,386.

For further information see Chapter 19, Housing and Construction.

### Municipal services

Since its establishment, Canberra has been developed as a garden city. The ACT Parks and Conservation Service of the Department of Territories manages the urban open space in the ACT including parkland, sportsgrounds, public building surrounds, rural picnic grounds and other landscaped public areas. The total urban area managed during 1984-85 increased by approximately 279 hectares to a total of 8,559 hectares.

The Yarralumla Nursery, established in 1913, propagates trees and shrubs for use in development projects, as replacements in landscape maintenance and for issue to buyers of new home sites. In 1984-5, 528,819 trees and shrubs and 21,078 annual plants were produced.

The Horticultural Services Unit provides horticultural advice and trials turf grasses, trees, shrubs and new products and techniques for application in the Canberra environment.

### Land tenure

Reference has been made in earlier issues of the Year Book to the general conditions of land tenure in the Australian Capital Territory and to the area of alienated and leased land. The Agricultural Industry chapter in this Year Book contains statistical information on these subjects.

With minor exceptions the freehold estate of land in the Australian Capital Territory has been acquired by, and is vested in the Crown. The *Seat of Government (Administration) Act 1910* prevents the sale or disposal of such Crown land for any estate in freehold except in the case of a contract that preceded the Act. Progressively the remaining areas of freehold land are being acquired.

Leases of land for residential, commercial and other purposes in the city area are usually granted under the *City Area Leases Ordinance 1936*. Some special leases for other purposes (such as diplomatic sites or churches) are granted under the *Leases (Special Purposes) Ordinance 1925* or the *Church Lands Leases Ordinance 1924* or the *Leases Ordinance 1918* if for a short term or experimental land use. Some areas outside the city area not immediately required for the development of the City or for other public purposes or where there is no intention of development are leased for agriculture or grazing under the *Leases Ordinance 1918*. Under the *A.C.T. Nature Conservation Ordinance 1980*, 94,000 ha have been gazetted as Namadgi National Park.

The Commonwealth Territory at Jervis Bay, comprising about 7,360 ha, was acquired from New South Wales for the possible provision of port facilities in connection with the Australian Capital Territory. A portion of the area is occupied by the Royal Australian Naval College (*H.M.A.S. Creswell*) and a Royal Australian Navy airfield. Several blocks fronting Sussex Inlet plus an area on Bowen Island have been leased for guest houses and holiday camps, etc., under the *Leases Ordinance 1918*, and an area of land in the Murray's Beach area has been set aside for possible use as an atomic power station under the control of the Australian Atomic Energy Commission. An Aboriginal community is located at Wreck Bay. Approximately two thirds of the Territory is declared a Nature Reserve under the *Public Parks Ordinance 1928*. The reserved area and adjacent land managed in sympathy with the Reserve includes picnic and camping areas, afforestation and soil conservation activities and an annex to the National Botanic Gardens.

### Production

#### Forestry

Forestry field operations in the Australian Capital Territory began in 1915 with the planting of pines on the denuded slopes of Mount Stromlo to arrest soil erosion and to improve the visual quality of the landscape. In 1926 a program for development of commercial forests was approved following a comprehensive review of the Territory's potential for forest development. Major reviews of this program were made in 1932, 1954, 1967 and 1984; always, however, retaining the basic policy of systematic conservation and development. Forestry operations including fire protection treatment extend to some 13,000 ha of natural forest in the Cotter catchment and nearby areas. The more productive stands in these areas

were harvested extensively to provide timber for Canberra's post-war expansion and were subsequently treated to promote regeneration and protect the quality of water harvested.

The forest management in the Australian Capital Territory has been formulated to cater not only for commercial timber production but also to provide recreation facilities, an attractive visual environment for the national capital and to protect the water supply catchment.

The forest authority is charged with the management of some 37,100 ha of land in the Australian Capital Territory. As at 30 June 1985, the total area of coniferous plantations in the Australian Capital Territory and Jervis Bay was 14,500 ha nett. Of 220 ha at Jervis Bay, the majority consisted of *Pinus radiata* (Monterey Pine) and *Pinus elliottii* (Slash Pine). The plantations in the Australian Capital Territory consisted mainly of *Pinus radiata* and *Pinus ponderosa* (Yellow Pine). Total area of *Pinus radiata* was 13,800.

In 1984-85 there was no commercial production of hardwood timber from the Australian Capital Territory and Jervis Bay. The volume of softwood cut was 192,000 cubic metres. The total value of this unprocessed timber unloaded at the mill (mill door value) was \$6.69 million.

In 1983-84 there was no commercial production of hardwood timber from the Australian Capital Territory and Jervis Bay. The volume of softwood cut was 177,000 cubic metres. The total value of this unprocessed timber unloaded at the mill (milldoor value) was \$6.04 million.

#### Agriculture and secondary industries

Since 1974-75 the number of agricultural establishments in the Australian Capital Territory has fallen from 142 to 95. In 1983-84 small amounts of wheat and oats for grain were grown and over 10,000 tonnes of meat (carcass weight) produced. Livestock numbers at 31 March 1984 included 9,711 cattle and 110,305 sheep.

Secondary industries established in the Australian Capital Territory are largely the service industries associated with the growth of the Territory.

#### AUSTRALIAN CAPITAL TERRITORY: MANUFACTURING ESTABLISHMENTS—1981-82 TO 1983-84

	Unit	1981-82	1982-83	1983-84
Establishments operating during year . . . . .	No.	126	150	148
Persons employed (a) . . . . .	No.	3,451	3,228	3,247
Wages and salaries . . . . .	\$m	49.4	54.6	58.8
Turnover . . . . .	\$m	187.7	217.5	279.7
Opening stocks at 30 June . . . . .	\$m	14.4	47.8	61.6
Closing stocks at 30 June . . . . .	\$m	16.8	52.4	82.1
Purchases, transfers in and selected expenses . . . . .	\$m	111.7	125.6	181.2
Value added . . . . .	\$m	78.4	96.5	118.9

(a) Average over whole year. Includes working proprietors.

### Commercial practices

The Consumer Affairs Bureau receives and investigates complaints from consumers about unfair commercial practices including credit transactions, conducts research into matters affecting consumer interests and provides information of benefit to consumers. The Bureau also provides advice to both landlords and tenants in relation to residential tenancies.

The Weights and Measures Office maintains the standards of mass, length and volume for the ACT. It periodically examines all scales and measures used for trade, and checks the weight or measures of packaged goods sold in retail premises. The Office also receives and investigates consumers' complaints in relation to weights and measures problems.

In the ACT licensing is used as a means of regulating some commercial practices by establishing minimum standards of qualifications and/or experience for entry into certain occupations. These include motor vehicle dealers, pawn brokers and second hand dealers, real estate, stock and station and business agents. Licensing is also used in relation to the activities of all racing codes in the Territory.

The *Co-operative Societies Ordinance 1939* provide for the incorporation of building societies, trading housing and service societies and credit unions. The Registrar is responsible for the incorporation of new societies, the registration of documents, inspections and inquiries into the working and financial situation of societies and the hearing and determination of certain disputes between a society and a member.

The Business Franchise (Tobacco and Petroleum Products) Ordinance regulates the sale of such products out of the ACT.

In Canberra there are two retail fruit and vegetable markets. These have been established, operated and controlled by the Canberra Retail Markets Trust. The Establishment of a third market in the Tuggeranong Valley is being considered. Local advice is also provided to small business through the ACT Small Business Bureau.

### **Transport and communication**

The Department of Territories and Local Government is responsible for the regulation of transport and traffic under an A.C.T. Ordinance. ACTION, the Australian Capital Territory Internal Omnibus Network, is also operated by the Department of Territories. It operated 398 buses in 1984-85 over 113 routes covering 1,295 kilometres. A total of 16,440,000 kilometres was travelled and 24,000,000 passenger journeys made.

There are six radio broadcasting stations currently in the Territory with the possibility of one new commercial licence and one community licence being granted in the near future: 2CY, 2CN and ABC-FM of the national broadcasting system; two commercial stations, 2CA, and 2CC; and one community station 2XX. There are three television stations, ABC Channel 3 of the national broadcasting system; Channel 0-28 of the Special Broadcasting Service and Australian Capital Television Pty Ltd (Capital 7), a Canberra based commercial station.

### **Social**

*See also* Chapter 10, Health; Chapter 11, Law and Order; and Chapter 12, Education.

#### **Schools**

The *Education Ordinance 1937* provides for the compulsory attendance at school of children between the ages of six and fifteen years. Government schools are administered by the A.C.T. Schools Authority, which became a Statutory body in January 1977. The Authority is representative of teachers, parents and the community. The A.C.T. Schools Accrediting Agency within the Authority system accredits courses and administers student assessment procedures for years 11 and 12. These procedures replaced the New South Wales Higher School Certificate examination at the end of 1976.

In July 1984 there were seventeen government high schools in the Australian Capital Territory, and eight secondary colleges. High schools cater for Years 7 to 10 and secondary colleges for Years 11 and 12. Secondary students enrolled numbered 17,094.

Sixty-four schools provide courses at primary levels, three of these being in rural districts and one in the Jervis Bay area. The number of pupils enrolled in government primary schools at July 1984 was 22,428.

There are four government special schools in the A.C.T. with a total enrolment of 328 students. These schools cater for pre-school, primary and secondary school aged students who are physically or intellectually handicapped. There are two other Special Facility Establishments in the A.C.T., one providing schooling for hospitalised students, one catering for severely or profoundly intellectually handicapped students. The total enrolment at these facilities was 28 at July 1984. Mildly intellectually handicapped children are served by learning centres attached to nine primary schools and three high schools.

Special units for deaf children are available to three schools, blind children also receive specialised support. Children below school age with learning, sight or hearing problems receive assistance from specially-trained staff at pre-schools and in their homes.

Eleven primary schools cater for children of junior primary age who are unable to adjust to a normal class situation. One school caters for children with language and communication disorders. Educational guidance services are provided by two Education Clinics and through counselling staff attached to schools.

Special English classes for migrant children are available at fifty-three primary schools, sixteen high schools and seven secondary colleges. Three Introductory English Centres (two for primary, one for secondary aged pupils) cater for migrant children with little or no English. They attend for up to six months and then return to their neighbourhood school or college.

The seventy-three pre-schools provide facilities for 4,670 children between the ages of three and five years. Provision is made at all pre-schools for the additional enrolment of children who have minimal problems such as speech, behavioural and family problems.



In July 1984 there were twenty-two non-government primary schools in Canberra, eight schools offering both primary and secondary schooling and five schools with secondary grades only. There were 10,311 pupils enrolled in primary grades at non-government schools and 8,758 in the secondary grades at these schools.

#### **A.C.T. Further Education**

The Office of A.C.T. Further Education, which operates within the structure of the Department of Education and Youth Affairs, is responsible for the Technical and Further Education Colleges, the Canberra School of Art and the Canberra School of Music. The Office is also responsible for the A.C.T. Apprenticeship Board and for the co-ordination of the provisions of Adult Migrant Education.

There are presently three TAFE Colleges in the A.C.T.: Canberra, Bruce and Woden. These Colleges provide trade, post trade, certificate, associate diploma, craft and leisure type courses at their main campuses and at several annexes. In the year ended 31 December 1983 there were 25,293 enrolments in A.C.T. TAFE Colleges.

The Canberra School of Art offers a Diploma of Arts (Visual), three years full-time study or part-time equivalent; an Associate Diploma of Arts (Visual), two years full-time study or part-time equivalent; and a Postgraduate Diploma, one year full-time study. It also provides art courses for students from the Canberra College of Advanced Education as well as non-vocational classes for the community in general. In the year ended 31 December 1983 there were 1,161 enrolments at the School.

The Canberra School of Music offers a Bachelor of Music, four years full-time study, and a Diploma of Music, three years full-time study. Courses for Canberra College of Advanced Education students and single study classes for part-time students are also offered. In the year ended 31 December 1983 there were 736 enrolments at the School.

It should be noted that enrolment figures here are course enrolments and are not adjusted for those students enrolled in more than one course at any time.

#### **Other Tertiary Educational Institutions**

The Canberra College of Advanced Education is administered by a governing Council constituted under an Act of Parliament and offers courses in six schools—Administrative Studies, Applied Science, Liberal Studies, Education, Information Sciences and Environmental Design. Courses have a professional or vocational orientation and lead to master and bachelor degrees, and associate and graduate diplomas. There were 5,129 students enrolled as at August 1984.

The Australian National University was established by an Act of Parliament and is administered by its governing Council. The Institute of Advanced Studies within the University is a centre for research and training in research. It includes the John Curtin School of Medical Research and Research Schools of Physical Sciences, Social Sciences, Pacific Studies, Chemistry, Biological Sciences and Earth Sciences. The faculties carry out both undergraduate and post-graduate training and research and are composed of the facilities of Arts, Asian Studies, Economics and Commerce, Law and Science. The total student enrolment as at August 1984 was 6,194.

The University has established the following centres: Centre for Resource and Environmental Studies; Humanities Research Centre; North Australia Research Unit (based in Darwin); Centre for Continuing Education; Peace Research Centre; Office for Research in Academic Methods; and the National Health and Medical Research Council Social Psychiatry Research Unit and Health Economics Research Unit.

#### **Continuing education**

The Centre for Continuing Education, which is run by the Australian National University, is intended to foster 'the learning society' by enriching the contacts between the university and the community to their mutual advantage. The Centre offers a wide range of courses in the natural and social sciences and the humanities.

Evening classes in the A.C.T. are provided at two high schools and four secondary colleges as a continuing education service by the A.C.T. Schools Authority. Enrolments in evening classes in July 1984 numbered 2,786, of which 1,488 were enrolled in recreational classes. Evening classes offer courses leading to the award of a certificate of entry of post-secondary and tertiary institutions as well as a variety of craft and cultural courses.

### **Apprenticeship training**

The A.C.T. Apprenticeship Board, a Statutory Authority, is responsible for supervision over the practical and theoretical training of apprentices in the Australian Capital Territory.

At 30 June 1984, 1,239 indentured apprentices were in training in 54 declared apprenticeship trades in the Australian Capital Territory. They were employed by about 750 employers who had been approved to train. During 1983-84 the Board received 1,107 applications for apprenticeship.

New indentures totalling 480 were registered, an increase of 4.1% over new indentures for 1982-83. 347 apprenticeships were completed and 187 cancelled.

### **Adult migrant education**

The Office of A.C.T. Further Education, on behalf of the Department of Immigration and Ethnic Affairs, is responsible for the Adult Migrant Education Program in the A.C.T. All classes are free and they are open to migrants who are permanent residents of Australia.

The language program is organised in two strands, an on-going strand for migrants who have been in Australia for some time and an on-arrival strand for newly arrived migrants. As part of the on-going program part-time classes are offered at different levels and at various times in the day and evening. A more intensive part-time course, aimed primarily at unemployed migrants whose lack of proficiency in the English language is prejudicing their employment prospects, is available as is a full-time accelerated English course lasting ten weeks.

As well, English classes are provided in the work place either partly or wholly within working hours. Migrants who are unable to attend classes may undertake a correspondence course, or have a tutor visit them in their own homes.

The on-arrival strand of the program caters for migrants who have arrived in Australia within the previous twelve-months. The courses offered provide an introduction to Australian society and way of life as well as a basic English language instruction. On completion, students are encouraged to enrol in part-time classes.

All migrants attending full-time courses are eligible to receive a living allowance subject to a means test.

### **Employment Advisory Committee**

The Government established an Employment Advisory Committee in September 1983 to advise the Minister on A.C.T. employment issues and to recommend employment creation proposals to be funded under the CEP.

### **Community Employment Program (CEP)**

In the three years 1983-84, 1984-85 and 1985-86 the CEP has provided funds of \$13.159m for job creation in the A.C.T. A further amount of \$4.379m was provided from contributions by the Department of Territories. The total number of projects approved and recommended in the A.C.T. up to July 1985 was 286 which created 1,106 jobs. The total value of these projects is \$15.18m, \$10.47m being provided by CEP funds and the balance by the Department of Territories and private sponsors.

## **Tourism**

Tourism is important to the A.C.T. economy and in the planning and development of the Capital. The number of visitors per annum now exceeds 3 million and their expenditure in the Territory and Queanbeyan exceeds \$200 million. It is estimated that tourism sustains employment for 7,000 people in the district.

The official tourist servicing and promotional operation in the A.C.T. is provided by the Department of Territories through the Canberra Tourist Bureau. Planning and development of physical facilities remain the responsibility of the National Capital Development Commission.

The Bureau operates a highway reception and information centre on the northern (main) gateway to the city, and branch offices in Sydney and Melbourne. Total operational costs, including salaries and overtime, will approximate \$2,411,000 in 1985-86.

Tourist features in the A.C.T. most patronised are the Australian War Memorial, Australian National Gallery, Black Mountain Telecommunications Tower, High Court of Australia, Parliament House, the New Parliament House Construction Site Exhibition, the National Library, Royal Australian Mint and the Regatta Point Display. Mountain lookouts and reserves are also significant attractions.

## Finance

In the following table, identifiable revenue and outlay relating to the Australian Capital Territory have been classified in a National Accounts form. The table covers transactions of the Commonwealth Government in respect of the Australian Capital Territory in the Consolidated Revenue Fund and the following trust funds: Australian Capital Territory Forestry, Australian Capital Territory Housing, Australian Capital Territory Transport and Australian Capital Territory Suspense. In addition, details of the financial transactions of the following public corporations are also covered: Australian Capital Territory Electricity Authority, Commonwealth Brickworks (to September 1979), Canberra Retail Market Trust, National Capital Development Commission, the Canberra Theatre Trust, the Canberra College of Advanced Education, A.C.T. Gaming and Liquor Authority, Canberra Commercial Development Authority and the Capital Territory Health Commission including the Canberra and Woden Valley Hospitals. Not included are revenue derived by the Commonwealth Government from income taxes, sales tax, etc., levied in the Australian Capital Territory; outlay on items of a national character such as defence, civil aviation, railways, etc.; and payments to residents from the National Welfare Fund.

## AUSTRALIAN CAPITAL TERRITORY: OUTLAY AND REVENUE (\$ million)

	1980-81	1981-82	1982-83
Current outlay . . . . .	305.4	348.6	392.8(a)
General government final consumption expenditure . . . . .	257.0	298.6	331.8(a)
Gross current expenditure . . . . .	324.3	377.1	428.9(a)
Offsetting receipts from sales, etc. . . . .	67.4	78.5	97.0
Required current transfer payments . . . . .	5.8	5.6	7.0
Interest payments . . . . .	5.8	5.6	7.0
Unrequited current transfer payments . . . . .	42.7	44.3	53.9
Subsidies paid to enterprises . . . . .	12.2	12.7	14.5
Subsidies to public trading enterprises . . . . .	12.0	12.5	14.1
Subsidies to other enterprises . . . . .	0.2	0.2	0.4
Personal benefit payments . . . . .	6.1	7.2	9.1
Current grants . . . . .	24.4	24.3	30.3
Grants to non-profit institutions . . . . .	24.4	24.3	30.3
Capital outlays . . . . .	75.4	66.7	84.1
Gross fixed capital expenditure . . . . .	104.6	83.6	109.1
Expenditure on new fixed assets . . . . .	116.0	83.3	110.9
Expenditure on secondhand fixed assets (net) . . . . .	-11.5	0.4	-1.9
Increase in stocks . . . . .	0.2	0.1	-0.7
Expenditure on land and intangible assets (net) . . . . .	-29.9	-26.3	-27.5
Capital Transfer payments . . . . .	3.9	2.8	2.8
Grants to private sector and public financial enterprises . . . . .	3.9	2.8	2.8
Advances paid (net): . . . . .	-3.4	6.5	0.4
To private sector . . . . .	-3.4	6.5	0.4
Revenue and grants received . . . . .	104.1	113.5	152.5
Taxes, fees and fines . . . . .	61.6	70.8	90.3
Taxes . . . . .	56.9	66.5	85.0
Fees from regulatory services . . . . .	3.1	2.8	2.8
Fines . . . . .	1.6	1.5	2.4
Net operating surpluses of trading enterprises . . . . .	11.5	14.2	24.0
Property income . . . . .	31.0	28.4	38.2
Interest received: . . . . .	25.4	26.2	31.4
From other sectors . . . . .	25.4	26.2	31.4
Other property income . . . . .	5.6	2.2	6.8
Other revenue . . . . .	—	—	—
Financing transactions . . . . .	-0.5	4.2	4.5
Domestic borrowing (net) . . . . .	-0.7	3.3	-0.4
Deposits received (net) . . . . .	-0.3	0.3	-0.2
Decrease in investments . . . . .	—	-1.8	-0.2
Decrease in currency and deposits . . . . .	3.1	-6.5	-12.2
Increase in provisions: . . . . .	3.8	6.0	5.6
Depreciation provisions . . . . .	2.7	3.3	4.0
Other provisions . . . . .	1.1	2.7	1.5
Other funds available (net) . . . . .	-6.5	3.9	2.8
Net charge to Commonwealth budget . . . . .	277.2	297.6	328.9

(a) Includes estimate of expenditure on Police Services in the Australian Capital Territory. Information on the actual expenditure on these services is not available.

## NORFOLK ISLAND

### General description

Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29°02'S, longitude 167°57'E approximately. Its total area is approximately 3,455 hectares, the island being about 8 kilometres long and 5 kilometres wide. It is 1,676 kilometres from Sydney, 1,063 kilometres from Auckland and 772 kilometres from Noumea. The coastline, which is 32 kilometres long, consists of almost inaccessible cliffs rising from the waters edge, except at Kingston in the south and the landing place at Cascade on the northern side. The climate is equable, the average daily maximum temperature varying between 16°C and 28°C, and the average annual rainfall is 1,350 millimetres. The resident population is about 1,800.

The island served as a penal station from 1788 to 1814 and from 1825 to 1855. In 1856, 194 descendants of the *Bounty* mutineers were transferred from Pitcairn Island.

### Administration

In 1856, the Island was created a distinct and separate settlement under the jurisdiction of the Governor of New South Wales. In 1897 it was made a dependency under the Governor of that Colony, and finally, by the passage of the *Norfolk Island Act 1913*, became a Territory of Australia.

In May 1978 the Government announced that it should try to develop for Norfolk Island a form of Government involving the Island's own elected representatives under which the necessary revenue could be raised by its own system of law. The *Norfolk Island Act 1979*, which was assented to on 30 May, established the framework for this objective. In broad terms, the Act equips Norfolk Island with responsible legislative and executive government to enable it to run its own affairs to the greatest practicable extent. Wide powers are exercised by the Norfolk Island Legislative Assembly and by an Executive Council, comprising the executive members of the Legislative Assembly who have ministerial-type responsibilities. The Act preserves the Commonwealth's responsibility for Norfolk Island as a Territory under its authority, with the Minister for Territories as the responsible Minister; and indicates the Parliament's intention that consideration will be given to an extension of the powers of the Legislative Assembly and the political and administrative institutions of Norfolk Island within five years.

The Office of the Administrator is financed from Commonwealth expenditure which amounted to \$238,393 in 1984-85. A further \$350,000 was provided by the Commonwealth during the year for the restoration and maintenance of historic structures.

### Economic activity

The major economic activity of the islands is tourism. Primary production is not fully adequate for local needs and foodstuffs are imported from New Zealand and Australia.

*Primary industries.* The soil on the island is particularly fertile, the climate equable and the rainfall fairly evenly distributed except for a pronounced dry period in November. This enables a wide range of temperate and semi-tropical products to be cultivated. However, the island's comparative isolation presents trading difficulties, and there is only very limited production of export crops.

Fish abound off the island. In the past a number of ventures have been formed to exploit this resource, but they have been short-lived, mainly because of the lack of a sheltered harbour. A modern whaling station was started on the island in 1955, and production commenced during the second half of 1956. Owing to a marked scarcity of whales after 1961 the station was closed down.

A forestry program is being carried out to increase the resources of Norfolk Island Pine and to introduce suitable types of eucalypts.

*Tourists.* Regular sea and air services to the island are available for those who seek a quiet holiday in surroundings of beauty and historic interests. At present, accommodation consists of flats and hotels as well as licensed and unlicensed guest houses.

*Employment.* A large proportion of the population derives its income from various aspects of the tourist industry including the operation of hotels and low duty stores. The Commonwealth Government provides service through staff from the Department of Aviation and Science (Bureau of Meteorology). A number of clerical and other positions are available to islanders in the Norfolk Island Administration. Very few people rely entirely on agricultural pursuits for their income.

### Trade, transport and communication

Imports to Norfolk Island since the 1939-45 War have risen from \$65,000 in 1945-46 to over \$17 million in 1984-85. The major proportion came from Australia and New Zealand. Exports in 1984-85 amounted to \$2 million, mainly to Australia and New Zealand, the principal markets.

One shipping company operates a service to Norfolk Island at approximately monthly intervals, linking the island with Australia, New Zealand and other islands in the South Pacific area.

A passenger and air freight service between Sydney and Norfolk Island is operated daily by East-West Airlines Ltd. Air New Zealand Limited provides a service 2-3 times a week to the island from Auckland. Flights between Norfolk and Brisbane are operated by Air New South Wales 2-3 times a week and by Norfolk Island Airlines 2-4 times a week.

There are approximately 80 kilometres of motor roads on the island. A substantial section of the population possesses private motor cars. Hire cars, taxis and scooters are available.

The island has an automatic telephone exchange and international telephone connection with Australia, New Zealand and Fiji by way of the ANZCAN submarine cable system. A local broadcasting service is operated by the Administration.

### Education

Education is free and compulsory between the ages of 6 and 15 years. The school, which is conducted for the Administration by the New South Wales Department of Education, conforms to the Australian standard of public education, ranging from Kindergarten to the School Certificate (Year 10) level. The number of students enrolled at 30 June 1985 was 305.

Some bursaries, subject to a means test, are available for pupils who wish to attend a mainland school either to continue their studies beyond the School Certificate level or to undertake high school courses not available on the island. A limited number of trainee scholarships are available for pupils who have left school and wish to undertake apprenticeships or similar training away from the island.

### Judiciary

The judicial system of Norfolk Island consists of a Supreme Court and a Court of Petty Sessions. The Supreme Court is the highest judicial authority in the Territory and is a superior court of record with original criminal and civil jurisdiction. The jurisdiction of the court is exercised by one judge sitting in court or, to the extent that in the cases provided by or under ordinance, sitting in chambers.

### Finance

Until 1979 Norfolk Island revenue was supplemented by annual grants from the Commonwealth Government. Under present constitutional arrangements the cost of maintaining the island, other than the Administrator and his staff, is met as far as practicable from Island sources.

#### NORFOLK ISLAND: REVENUE AND EXPENDITURE (\$'000)

	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
REVENUE						
Customs duty . . . . .	680	995	785	710	1,104	1,373
Liquor profit . . . . .	332	339	287	288	423	439
Company fees . . . . .	137	121	103	111	96	94
Sale of stamps . . . . .	856	1,075	1,351	755	1,016	801
Vehicle registration and licence fees	77	81	57	92	113	117
All other . . . . .	427	677	830	718	1,094	1,624
<b>Total revenue . . . . .</b>	<b>2,509</b>	<b>3,288</b>	<b>3,413</b>	<b>2,674</b>	<b>3,846</b>	<b>4,448</b>
EXPENDITURE						
Administration . . . . .	736	903	1,334	1,214	1,451	1,669
Education services . . . . .	122	425	722	453	627	627
Health and welfare services . . . . .	312	363	452	485	469	514
Repairs and maintenance . . . . .	389	378	470	436	467	571
Capital works and services . . . . .	252	353	317	210	99	265
Miscellaneous services . . . . .	242	155	277	278	312	312
Legislative Assembly . . . . .	92	234	110	183	192	230
<b>Total expenditure . . . . .</b>	<b>2,145</b>	<b>2,811</b>	<b>3,682</b>	<b>3,261</b>	<b>3,617</b>	<b>4,188</b>

## HEARD ISLAND AND McDONALD ISLANDS

These islands, about 4,100 kilometres south-west of Fremantle, were transferred from the United Kingdom to Australia as from 26 December 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard Island and McDonald Islands by the *Heard and McDonald Islands Act 1953*. In 1968, the responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply, and in 1972 the responsibility was transferred to the Minister for Science.

In December 1947, an Australian scientific station was established on Heard Island. Meteorological investigations were conducted until the station was closed in March 1955 following the establishment of Mawson station on the Antarctic mainland. Australian expeditions have since visited the Island from time to time. Heard Island is about 43 kilometres long and 20 kilometres wide. The McDonald Islands are 43 kilometres to the west of Heard Island. They are small, rocky and precipitous. The first known landing on McDonald Island, the largest of the group of the same name, took place on 27 January 1971 when two members of the Australian National Antarctic Research Expeditions (ANARE) paid a short visit on their way to the Heard Island station.

## AUSTRALIAN ANTARCTIC TERRITORY

An Imperial Order in Council of 7 February 1933 placed under Australian authority all the islands and territories other than Terre Adelie situated south of 60°S latitude and lying between 160°E longitude and 45°E longitude. The Order came into force with a proclamation issued by the Governor-General on 24 August 1936 after the passage of the *Australian Antarctic Territory Acceptance Act 1933*. The boundaries of Terre Adelie were definitively fixed by a French Decree of 1 April 1938 as the islands and territories south of 60°S latitude lying between 136°E longitude and 142°E longitude. The *Australian Antarctic Territory Act 1954* declared that the laws in force in the Australian Capital Territory are, so far as they are applicable and are not inconsistent with any ordinance made under the Act, in force in the Australian Antarctic Territory. In 1968 responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply, and in 1972 the responsibility was transferred to the Minister for Science.

On 13 February 1954 the Australian National Antarctic Research Expeditions (ANARE) established a station on Mac-Robertson Land at latitude 67° 36'S and longitude 62° 53'E. The station was named Mawson in honour of the late Sir Douglas Mawson and was the first permanent Australian station to be set up on the Antarctic continent. Scientific research (including meteorology, cosmic ray physics and glaciology) is conducted at Mawson, which is also a centre for coastal and inland survey expeditions.

A second Australian scientific research station was established on the coast of Princess Elizabeth Land on 13 January 1957 at latitude 68°35'S and longitude 77°58'E. The station was named in honour of the late Captain John King Davis, second-in-command of two of Mawson's expeditions and master of several famous Antarctic ships. The station was temporarily closed on 25 January 1965 and re-opened on 15 February 1969. On 4 February 1959 the Commonwealth Government accepted from the United States Government custody of Wilkes station, which was established by the United States on 16 January 1957 on Vincennes Bay at latitude 66°15'S and longitude 110°32'E. The station was named in honour of Lieutenant Charles Wilkes who commanded the 1938-42 United States expedition to the area. The station was closed on 19 February 1969 when activities were transferred to Casey station built about 2 kilometres south of Wilkes. Casey station, which was opened on 19 February 1969, was named in honour of Lord Casey, former Governor-General of Australia, in recognition of this long association with Australia's Antarctic effort.

In 1981-82 a ten-year program for redeveloping Australia's Antarctic stations began and is now well advanced. The stations act as bases for mounting inland programs and provide basic facilities for weather observations, communications and research.

The highest priority for research relates to the study of living and mineral resources of the Antarctic continent and off-shore areas and the environmental effects of their exploration and exploitation.

## COCOS (KEELING) ISLANDS

### **General description**

The Territory of the Cocos (Keeling) Islands comprises a group of 27 small coral islands in two separate atolls in the Indian Ocean, 2,768 kilometres north-west of Perth.

West Island, about 10 kilometres long, is the largest. The Territory's administrative community, airport and animal quarantine station are located there. The Cocos Malay community lives on Home Island. The main atoll is low-lying, flat, and thickly covered by coconut palms, and surrounds a lagoon which has an anchorage in the northern part but which is extremely difficult for navigation.

The climate is equable and pleasant, usually being under the influence of the south-east trade winds for about nine months of the year. However, the winds vary at times, and meteorological reports from the Territory are particularly valuable for those engaged in forecasting for the eastern Indian Ocean. The temperature varies between 21°C and 32°C, and the average yearly rainfall is 1,998 millimetres. There are occasional violent storms.

### **History and administration**

The islands were discovered in 1609 by Captain William Keeling of the East India Company, but were uninhabited until Alexander Hare and John Clunies-Ross established small settlements at different points on the main atoll in 1826 and 1827 respectively. Clunies-Ross secured sole possession in 1831 and the islands were declared part of the British Dominions in 1857. In 1878 responsibility for the supervision of the islands was transferred to the Government of Ceylon and eight years later, to the Government of the Straits Settlements.

In 1903 the islands were incorporated in the Settlement of Singapore but were attached again to Ceylon during the 1939-45 war while Singapore was under Japanese occupation.

By mutual agreement between the British and Australian Governments, and confirmed by complementary legislation, the islands became an Australian territory in 1955. The Australian Government purchased the Clunies-Ross interests in the Territory in 1978, except for the family home and grounds.

*The Cocos (Keeling) Islands Act 1955* is the basis of the Territory's administrative, legislative and judicial systems.

An Administrator, appointed by the Governor-General and responsible to the Minister for Territories, is the senior Government representative in the Territory.

On 25 July 1979 the Cocos (Keeling) Islands Council, elected by members of the Home Island community, was established. The Council has responsibility for a range of functions in the Home Island village area, advises the Administrator on local affairs, and is also empowered to make representations on ordinances proposed for the Territory.

The Cocos Islands Co-operative Society Limited, also established in 1979, conducts the business enterprises of the Cocos people. The Co-operative undertakes copra production, building maintenance and construction, stevedoring and lighterage services, retailing and provision of accommodation and catering services.

The Territory's own postal service, including a philatelic bureau, was opened in 1979. The service, run by the Administration, provides local employment and its profits are directed to the Cocos (Keeling) Islands Council for use on community projects.

On 6 April 1984 the Cocos Malay community, in an Act of Self Determination which took the form of a referendum observed by the United Nations, chose to integrate with Australia.

The population of the Cocos (Keeling) Islands at June 1985 was 621, distributed between Home Island (388) and West Island (233).

### **Transport and communication**

There is an airport of international standard at West Island, controlled by the Administrator under licence from the Department of Transport. The Department of Territories operates a weekly air charter service which alternates between the routes Perth-Christmas Island-Cocos (Keeling) Islands-Perth and Perth-Cocos (Keeling) Islands-Christmas Island-Perth. A shipping service operates to the Territory every 6-8 weeks. The Administration operates and maintains, on behalf of the Overseas Telecommunications Commission (Australia), a satellite communications facility which provides telephone, facsimile and telex services to the Australian mainland and beyond. There are local postal and telephone services, and a non-commercial broadcasting station.

## CHRISTMAS ISLAND

### General description

Christmas Island is an isolated peak situated in the Indian Ocean in latitude 10°25'S, longitude 105°40'E. It is approximately 360 kilometres south from Java Head at the south entrance to Sunda Strait, 1,300 kilometres from Singapore and 2,600 kilometres from Perth. Christmas Island covers an area of about 135 square kilometres. It consists of a central plateau about 150 to 250 metres above sea level with several prominent rises up to 360 metres high. The plateau descends to the sea in a series of steep slopes alternating with terraces. Sea cliffs over 20 metres high run along a considerable portion of the coastline except in a few places, the chief of which is Flying Fish Cove where the principal settlement is located and which is also the only anchorage.

The climate is pleasant, with prevailing winds coming from the south-east to east-south-east from May to December, and occasionally shifting round to between north and west from December to April (the wet season). The average yearly rainfall is about 2,673 mm with a marked summer incidence. The porous nature of the ground prevents the formation of pools of water, but there are several good springs which maintain an adequate supply of fresh water for the population of some 3,000 people and for the mining operations. The mean average temperature is about 27°C, and does not vary greatly throughout the year.

### Economy

The economy of the Territory is based almost entirely on the mining and extraction of phosphate. During the year ended 30 June 1985, 926,590 tonnes of phosphate rock were sent to Australia and New Zealand, while 255,400 tonnes were exported elsewhere. Mining operations on Christmas Island are conducted by the Phosphate Mining Company of Christmas Island, Ltd (PMCI) which is wholly owned by the Australian Government. To minimise the impact of mining on the environment, a program of land rehabilitation has been adopted and a nursery is maintained for reforestation.

### Population

Some 2,278 people were residents of the Island at 30 June 1985. There is no indigenous population. Under the provisions of the Christmas Island Act and the Citizenship Act almost all residents are Australian citizens or have permanent Australian resident status.

### Education

The Christmas Island Area School provides pre-school, primary and secondary education, based on the Western Australian curriculum. The Christmas Island Technical School conducts trades and commercial courses, and provides adult education classes and supervision of correspondence courses from the Western Australian Education Department's Technical Extension Service. Over 500 students are enrolled at the Area School.

### History and administration

Summarised particulars of the history of Christmas Island up to its administration by the United Kingdom as a separate Crown Colony (from 1 January 1958, pending transfer to Australia) are given in Year Book No. 51, page 141, and in earlier issues. On 1 October 1958 the island was transferred to Australia by the *Christmas Island Act 1958*. The Territory is administered by an Administrator appointed by the Governor-General. Responsibility for the administration and government of the Territory rests with the Minister for Territories and Local Government and the Administrator administers the Territory in accordance with instructions given to him by the Minister. The laws which were in force on the Island at 30 September 1958 were continued as the laws of the Territory after its transfer to Australia.

The Christmas Island Administration (Miscellaneous Amendments) Act received Royal Assent on 18 October 1984. The Act provides for the extension of the Commonwealth Electoral Act, Social Security Act, National Health Act, Student Assistance Act and related relevant Acts to Christmas Island. Following passage of the legislation, normal social security and health benefits apply with effect from 1 October 1984 and Australian citizens are entitled to vote in federal elections and referendums. Amendment of the *Christmas Island Act 1958* will enable ordinances to be made to regulate the use of land occupancy.

The *Services Corporation Ordinance 1984* was made on 26 October 1984, creating the Christmas Island Services Corporation (CISC) with power to provide many local and community services on the Island.



The *Taxation Laws Amendment Act 1985* was assented to on 30 May 1985. In part this Act extends to residents of Christmas Island the liability to pay personal income tax. Full liability for personal income tax is to be phased in over a four-year period from 1985-86.

#### **Transport and communication**

Sea transport to and from the Island is maintained by vessels operated under charter by the Australian Phosphate Manufacturers and the PMCI.

An air charter arranged by the Department of Territories provides a weekly service to the Island following alternate routes Perth-Christmas Island-Cocos (Keeling) Islands-Perth one week and Perth-Cocos (Keeling) Islands-Christmas Island-Perth the next. The PMCI operates a weekly air charter between Singapore and the Island.

The Territory has its own radio broadcasting station, police force, postal service and philatelic bureau. The INMARSAT installation commenced operation in September 1985 as a back-up to VISTA, for urgent telex and outward telephone calls. In October 1985 VISTA, which transmits a telephone service by INTELSTAT satellite, became fully operational.

### **CORAL SEA ISLANDS**

The Coral Sea Islands Territory comprises scattered reefs and islands, often little more than sandbanks, spread over a sea area of 780,000 square kilometres with only a few square kilometres of land area. The territory lies between the Great Barrier Reef and longitude 156°06'E and between latitude 12° and 24°S. Some of the better known islands in the Territory are Cato Island, Chilcott Islet in the Coringa Group and the islands of the Willis Group.

The islands, or cays, are formed largely of coral and sand and some have a cover of grassy or scrub-type vegetation. Large populations of sea birds nest and breed in the area.

The Lihou Reef and Coringa-Herald National Nature Reserves, declared on 3 August 1982, provide protection for the wide variety of wildlife in these areas.

#### **History**

About one hundred years ago guano workers camped on a number of the islands. They were there to collect manure deposits by the sea birds. However, isolation, a lack of permanent fresh water, and the limited size of the islands, discouraged any further occupation.

The Commonwealth Government based its claim to the Coral Sea Islands on numerous acts of sovereignty since early this century and asserted its sovereignty by enacting the *Coral Sea Islands Act 1969* (which declared the Coral Sea Islands to be a territory of Australia).

#### **Installations**

A lighthouse has been erected on Bougainville Reef and beacons operate on Frederick and Saumarez Reefs. A three-man meteorological station has provided a service on Willis Island since 1921 and there are automatic weather stations on Cato Island, Flinders Reef, Frederick Reef, Holmes Reef, Lihou Reef and Marion Reef.

Most of the islands have been surveyed and the area is visited regularly both by Royal Australian Navy vessels and maintenance vessels of the Bureau of Meteorology.

#### **Administration**

The laws of the Australian Capital Territory are applied in the Coral Sea Islands Territory by the *Coral Sea Islands Application of Laws Ordinance 1973*. The Minister for Territories is responsible for matters affecting the Territory.

### **TERRITORY OF ASHMORE AND CARTIER ISLANDS**

#### **General description**

Ashmore Islands (known as Middle, East and West Islands) and Cartier Island are situated in the Indian Ocean some 850 kilometres and 790 kilometres west of Darwin respectively. The Islands lie at the outer edge of the continental shelf. They are small and low and are composed of coral and sand.

#### **History and administration**

Great Britain took formal possession of the Ashmores in 1878 and Cartier was annexed in 1909. By Imperial Order in Council of 23 July 1931, the Islands were placed under the authority of the Commonwealth of Australia. The Islands were accepted by Australia through the *Ashmore and Cartier Islands Acceptance Act 1933* under the name of the Territory of

Ashmore and Cartier Islands. The Territory was subsequently annexed to, and deemed to form part of, the Northern Territory. With the granting of self government to the Northern Territory on 1 July 1978, the administration of the Islands became a direct responsibility of the Commonwealth Government.

On 16 August 1983, a national nature reserve was declared over Ashmore Reef and that area is now known as Ashmore Reef National Nature Reserve.

Although the Islands are uninhabited, Indonesian fishing boats which have traditionally plied the area, fish within the Territory under an agreement between the governments of Australia and Indonesia. To prevent any abuse of landing rights or destruction of protected wildlife, the Australian Government decided recently to establish an Australian presence in the Territory during the period March to November each year.

Periodic visits are made to the Islands by ships of the Royal Australian Navy, and aircraft of the Royal Australian Air Force and the Civil Coastal Surveillance Service make aerial surveys of the Islands and neighbouring waters.

## **BIBLIOGRAPHY**

### **ABS Publications**

Northern Territory Statistical Summary (1306.7)

Australian Capital Territory Statistical Summary (1307.8)

### **Other Publications**

Information additional to that contained in ABS publications is available in the Annual Reports of the Administrations of the various Territories.

## STATISTICAL SUMMARY: AUSTRALIA

In earlier issues of the Year Book, it was the practice to include in the Statistical Summary figures for every tenth year of the period 1861 to 1901, plus the latest year for which data were available. In each subsequent issue, the latest year available was substituted for the year immediately preceding it until the next tenth year had been reached, and the earliest year in the series was eliminated as space was needed. In consequence of this system, no single issue of the Year Book contained a continuous yearly series.

In recent issues of the Year Book, this defect has been remedied in part by the inclusion of a continuous series back to the year 1949 where possible, with earlier tenth years back to 1901. In this issue of the Year Book the time series has been altered to show a continuous series back to 1960 where possible, with earlier tenth years back to 1901. In issue No. 39, pages xxviii-xxix, some of the series are shown for every tenth year from 1861 to 1941. There are, however, discrepancies between the original series and the series now published.

Breaks in series, preliminary figures, etc., are indicated by the symbols on page xvii of this Year Book.

### DEMOGRAPHY

Year ended 31 December—	Population(a)			Natural increase	Net migration(b)	Marriages			Births		Deaths		Infant deaths		
	Males	Females	Persons			No.	Rate(c)	Divorces (d)	No.	Rate(c)	No.	Rate(c)	No.	Rate(e)	
1901	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000
1901	2,005	1,820	3,825	56.6	3.0	28	7.3	—	103	27.2	46	12.2	10.7	103.6	
1911	2,382	2,192	4,574	74.3	74.4	39	8.8	1	122	27.2	48	10.7	8.4	68.5	
1921	2,799	2,712	5,511	82.1	17.5	47	8.6	1	136	25.0	54	9.9	9.0	65.7	
1931	3,333	3,220	6,553	61.9	-10.1	39	6.0	2	119	18.2	57	8.7	5.0	42.1	
1941	3,599	3,545	7,144	59.1	6.9	75	10.6	3	135	18.9	75	10.6	5.3	39.7	
1951	4,311	4,217	8,528	111.5	108.9	77	9.2	7	193	23.0	82	9.7	4.9	25.2	
1960	5,253	5,139	10,392	141.9	89.1	75	7.3	7	230	22.4	88	8.6	4.6	20.2	
1961	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)
1961	5,374	5,268	10,643	151.8	58.7	77	7.3	7	240	22.8	89	8.5	4.7	19.5	
1962	5,470	5,376	10,846	144.4	59.0	79	7.4	7	237	22.3	93	8.7	4.8	20.4	
1963	5,572	5,484	11,055	141.3	68.1	81	7.4	8	236	21.6	95	8.7	4.6	19.5	
1964	5,683	5,597	11,280	129.1	95.8	86	7.7	8	229	20.6	101	9.0	4.4	19.1	
1965	5,794	5,712	11,505	123.7	101.3	94	8.2	9	223	19.6	100	8.8	4.1	18.5	
1966	5,891	5,814	11,705	119.2	80.2	96	8.3	10	224	19.3	105	9.0	4.2	18.7	
1967	5,992	5,920	11,912	126.6	80.8	100	8.5	10	229	19.4	103	8.7	4.2	18.3	
1968	6,108	6,037	12,146	131.4	102.0	106	8.8	11	241	20.0	110	9.1	4.3	17.8	
1969	6,238	6,169	12,407	143.7	118.0	112	9.2	11	250	20.4	106	8.7	4.5	17.9	
1970	6,365	6,299	12,663	144.5	111.8	116	9.3	12	258	20.6	113	9.0	4.6	17.9	
1971	(h)	(h)	(h)	(h)	(h)	(h)	(h)	(h)	(h)	(h)	(h)	(h)	(h)	(h)	(h)
1971	6,632.8	6,565.5	13,198.4	165.7	103.6	118	9.0	13	276	21.1	111	8.5	4.8	17.3	
1972	6,735.7	6,673.6	13,409.3	155.2	56.3	114	8.6	16	265	19.9	110	8.3	4.4	16.7	
1973	6,835.5	6,778.9	13,614.3	136.8	67.5	113	8.3	16	248	18.3	111	8.2	4.1	16.5	
1974	6,941.9	6,890.0	13,832.0	129.3	87.2	111	8.1	18	245	17.9	116	8.4	4.0	16.1	
1975	7,002.2	6,966.6	13,968.9	124.0	13.5	104	7.5	24	233	16.8	109	7.8	3.3	14.3	
1976	7,065.8	7,044.3	14,110.1	115.1	34.0	110	7.8	63	228	16.2	113	8.0	3.2	13.8	
1977	7,145.4	7,136.1	14,281.5	117.5	68.0	105	7.4	45	226	15.9	109	7.7	2.8	12.5	
1978	7,123.6	7,217.3	14,340.8	115.8	47.4	103	7.2	41	224	15.6	108	7.5	2.7	12.2	
1979	7,293.3	7,309.1	14,602.5	116.6	68.6	104	7.2	38	223	15.4	107	7.3	2.5	11.4	
1980	7,391.4	7,415.9	14,807.4	116.8	100.9	109	7.4	39	226	15.3	109	7.4	2.4	10.7	
1981	7,511.1	7,538.4	15,049.5	126.8	121.8	114	7.6	41	236	15.8	109	7.3	2.3	10.0	
1982	7,624.4	7,652.4	15,276.8	125.1	102.2	117	7.7	44	240	15.8	115	7.6	2.5	10.3	
1983	7,716.3	7,747.9	15,464.2	132.7	54.8	115	7.5	44	243	15.8	110	7.2	2.3	9.4	
1984p	7,806.0	7,842.9	15,648.9	126.5	58.1	109	7.0	43	234	15.1	110	7.1	2.2	9.3	

(a) At 31 December. (b) Net Overseas migration component used in population estimates. Prior to 30 June 1971, net migration includes discrepancies disclosed by the various censuses and is based on the excess of all arrivals over all departures. From 30 June 1971, net migration is defined as the excess of overseas arrivals over overseas departures classified as permanent and long-term (greater than one year). From 30 June 1976, net migration consists of net permanent and long-term movement and an adjustment for the net effect of changes in travel intentions which affect the categorization of movements. (c) Number per 1,000 of mean population. (d) Includes decrees made absolute and nullities of marriage up to and including 1946. From 1947 excludes nullities of marriage. (e) Number per 1,000 live births. (f) Excludes movements of defence personnel from September 1939 to June 1947. (g) Includes full blood Aborigines. (h) Figures for 1971 and later years are based on the estimate resident population introduced after the 1981 Census. Populations and rates for 1976 to 1981 have been recalculated using final 1981 Census results. (i) Introduction of Family Law Act.

SOCIAL—PENSIONS, BENEFITS, ETC.

Year ended 30 June—	Age and invalid pensions (including Wives Allowances Pensions)			Family allowances		Widow's pensions		Unemployment benefit	
	Pensioners (a)	No. of wives (b)	Amount paid (c)	No. of children (a)	Amount paid	Pensioners (a)	Amount paid (c)	No. on benefit— weekly average	Amount paid (c)
	'000	'000	\$m	'000	\$m	'000	\$m	'000	\$m
1912	90	..	4.3	..	..	..	..	..	..
1922	147	..	10.8	..	..	..	..	..	..
1932	261	..	22.3	..	..	..	..	..	..
1942	341	..	38.5	910	22.6	..	..	..	..
1952	426	11	119.6	2,518	93.2	41	11.2	2	(e)
1960	619	13	294.0	3,252	125.1	52	24.3	21	9.0
1961	651	14	315.9	3,340	(d) 148.6	55	26.9	22	8.9
1962	691	14	360.5	3,420	132.8	57	30.7	53	25.3
1963	711	15	375.5	3,458	135.4	58	31.4	40	21.3
1964	725	16	399.9	3,631	(d) 168.8	62	41.6	26	13.5
1965	736	16	426.6	3,711	172.8	65	47.0	14	6.8
1966	744	17	442.4	3,763	176.4	69	50.0	15	7.8
1967	764	19	481.8	3,835	(d) 199.3	73	56.4	21	11.2
1968	797	19	514.0	3,891	187.9	75	61.1	21	11.2
1969	827	20	558.6	3,996	193.3	78	69.1	18	9.3
1970	913	23	642.0	4,079	(d) 220.1	87	81.8	13	8.9
1971	942	23	702.3	4,156	198.5	90	90.5	15	10.8
1972	972	24	818.5	4,235	216.6	93	104.6	29	26.0
1973	1,081	41	1,072.4	4,239	(d) 253.9	106	140.5	40	46.6
1974	1,184	47	1,372.4	4,261	225.4	115	181.0	34	58.2
1975	1,266	51	1,918.9	4,284	224.9	121	241.4	117	251.7
1976	1,342	59	2,536.4	4,293	(d) 265.5	129	325.3	192	513.9
1977	1,408	69	2,994.6	4,302	1,023.3	139	370.2	216	618.1
1978	1,469	78	3,532.3	4,304	1,038.1	150	439.5	266	794
1979	1,312	86	3,919.4	4,231	(f) 974.9	161	499.3	(g) 306	910.0
1980	1,551	91	4,305.1	4,224	(h) 1,035.4	166	561.4	(i) 306	925.2
1981	1,569	86	4,816.5	4,227	950.4	166	641.8	(i) 310	995.7
1982	1,584	82	5,484.1	4,254	1,041.8	164	717.4	(a) 332	1,224.3
1983	1,611	83	5,935.9	4,303.3	1,373.7	165	758.1	540	2,249.0
1984	1,599	92	6,566.3	4,325.9	1,506.3	163	829.5	620	2,912.3
1985	1,591	99	7,108.7	4,323.4	1,505.0	160	889.4	582	2,983.6

Year ended 30 June—	Hospital and nursing home benefits— amount paid	Medical benefits— amount paid	Pharma- ceutical benefits— amount paid	Total Commonwealth Government expenditure on pensions, benefits, etc (f)	Disability pensions paid to veterans and dependants		Service pensions paid to veterans and dependants	
					No. (a)	Amount paid	No. (a)	Amount paid
	\$m	\$m	\$m	\$m	'000	\$m	'000	\$m
1912	..	..	..	4.3	..	..	..	..
1922	..	..	..	12.1	225	14.1	..	..
1932	..	..	..	23.0	274	14.9	..	..
1942	..	..	..	61.8	220	15.0	14	1.2
1952	13.4	2.1	15.4	275.2	525	66.7	17	3.6
1960	37.2	26.8	48.7	598.7	655	117.5	46	13.5
1961	41.3	28.4	55.8	661.2	662	132.6	50	15.6
1962	44.4	30.6	70.4	730.4	671	135.1	58	19.4
1963	47.3	32.6	76.9	758.6	671	140.7	62	21.7
1964	56.2	34.4	78.8	832.7	669	154.5	65	24.2
1965	58.8	44.6	82.2	890.4	660	153.5	65	25.5
1966	60.7	54.6	91.8	941.6	647	170.5	66	28.2
1967	67.4	58.2	101.3	1,031.1	632	161.7	67	29.1
1968	74.8	62.5	105.1	1,075.0	617	164.4	69	31.8
1969	85.9	66.5	118.4	1,162.3	601	182.8	67	34.1
1970	111.4	76.1	136.7	1,341.8	585	183.5	74	39.9
1971	122.8	115.5	160.3	1,477.2	570	191.4	77	43.7
1972	162.0	160.4	173.3	1,752.3	553	211.1	78	49.2
1973	198.9	191.1	177.6	2,197.4	546	225.0	96	72.3
1974	226.5	198.9	218.3	2,666.2	532	252.2	109	103.6
1975	292.8	243.6	262.3	3,691.0	514	314.1	122	155.2
1976	254.1	(k) 707.4	283.8	4,658.4	499	340.1	142	218.9
1977	195.4	(k) 551.8	234.9	5,925.4	485	371.5	164	283.3
1978	188.5	(k) 359.8	256.0	6,794.8	463	419.0	189	372.1
1979	200.2	(k) 528.8	271.3	7,365.0	448	415.3	212	436.0
1980	227.4	(k) 621.0	274.6	8,307.1	435	432.0	240	525.0
1981	277.8	682.9	309.2	9,367.5	423	496.3	272	686.5
1982	407.3	772.8	390.8	10,836.6	413	510.7	300	807.5
1983	511.9	916.8	430.3	11,557.7	410	646.5	341	1,058.0
1984	597.4	1,363.8	489.2	13,353.9	407	722.7	376	1,294.3
1985	n.y.a.	n.y.a.	n.y.a.	n.y.a.	408	837.2	392	1,477.9

(a) At 30 June. (b) Wives' allowance commenced on 8 July 1943 and replaced by wives' pension on 5 October 1972. (c) Includes expenditure on additional pension/benefit for children. (d) Five 12-weekly payments made during the year instead of the normal four. (e) Less than \$0.05 million. (f) Does not include \$22,714,000 paid in respect of family allowance payday 3 July 1979. (g) Estimate used for Western Australia. (h) Includes \$22,714,000 paid during 1978-79 in respect of family payday 3 July 1979. (i) Estimated. (j) National Welfare Fund items only, including expenditure for all years on pensions, benefits, etc. which subsequently became payable from the National Welfare Fund. In addition to the items shown in the preceding columns, the tables include expenditure on the rehabilitation service: milk for school children; tuberculosis campaign, sickness, special and funeral benefits and some miscellaneous welfare and health services. Excludes war and service pensions, telephone rental concessions for pensioners and some minor welfare and health services. (k) Medical benefits applicable to the period 1976-79 were funded from both National Welfare fund and consolidated revenue.

## SOCIAL—continued

## EDUCATION

## POLICE AND PRISONERS

Year (a)	Schools (b)				Students				T.A.F.E.(e)	Police(a)	Convicted Prisoners (f)
	Government		Non-government		Universities	Technical Education(c)	Advanced Education(d)				
	Number	Students	Number	Students							
1902	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	
1912	7.2	637	2.4	144	1.9	..	..	..	..	5.9	
1922	8.4	663	1.9	164	3.8	48.7	..	..	..	6.6	
1932	9.6	837	1.7	202	7.8	68.2	..	..	..	7.0	
1942	10.2	934	1.8	221	9.9	65.5	..	..	..	8.6	
1952	9.0	868	1.8	250	10.8	87.6	..	..	..	9.7	
1960	7.6	1,145	1.9	348	29.6	170.3	..	..	..	12.6	
1961	7.9	1,613	2.1	511	53.4	224.9	..	..	..	15.3	
1962	7.9	1,664	2.1	527	57.7	235.3	..	..	..	15.9	
1963	7.9	1,711	2.2	540	63.3	281.2	..	..	..	16.4	
1964	7.9	1,754	2.2	553	69.1	299.6	..	..	..	16.7	
1965	7.9	1,799	2.2	565	76.2	322.1	..	..	..	17.2	
1966	7.8	1,855	2.2	580	83.3	340.1	..	..	..	17.6	
1967	7.8	1,919	2.2	583	91.3	360.8	..	..	..	18.4	
1968	7.7	1,991	2.2	595	95.4	375.0	..	..	..	19.0	
1969	7.6	2,055	2.2	601	101.5	376.9	..	..	..	19.7	
1970	7.5	2,114	2.2	603	109.7	388.8	28.6	..	..	20.1	
1971	7.5	2,160	2.2	608	116.8	398.1	31.9	..	..	20.3	
1972	7.4	2,197	2.2	611	123.8	387.8	37.6	..	..	21.0	
1973	7.4	2,229	2.2	612	128.7	395.9	44.4	..	..	22.2	
1974	7.3	2,241	2.2	613	133.1	n.a.	52.0	..	..	23.1	
1975	7.3	2,253	2.2	618	142.9	430.3	61.6	..	..	24.4	
1976	7.3	2,290	2.1	620	148.3	..	107.2	612.6	..	25.7	
1977	7.3	2,323	2.1	624	154.0	..	122.6	688.8	26.3	8.0	
1978	7.3	2,349	2.1	630	158.4	..	134.6	768.4	27.4	8.1	
1979	7.4	2,354	2.1	638	160.0	..	140.3	818.8	27.9	8.7	
1980	7.4	2,337	2.2	650	160.8	..	149.9	871.0	31.0	9.4	
1981	7.4	2,318	2.2	666	163.2	..	155.7	911.7	31.6	8.8	
1982	7.5	2,299	2.3	688	166.6	..	161.6	983.3	32.3	n.a.	
1983	7.6	2,283	2.3	712	167.4	..	165.1	1,015.0	32.7	8.8	
1984	7.5	2,281	2.4	735	169.4	..	168.6	1,027.1	33.7	9.1	
1985	7.4	2,261	2.5	757	172.7	..	179.9	1,163.1	34.4	9.7	
1985p.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	..	185.8	n.y.a.	n.y.a.	n.y.a.	

(a) Years ended at varying dates for education statistics. Years ended 30 June for Police and Prisoners. (b) From 1974, all pre-primary education undertaken on a sessional basis or in a recognised pre-school class of a primary/secondary school has been excluded. (c) Includes students enrolled in Colleges of Advanced Education until 1968, Teachers Colleges, Schools, and Technical classes in High Schools. (d) Prior to 1983, includes students enrolled in Colleges of Advanced Education, and Teachers Colleges granted C.A.E. status (in 1974). 1983 onwards, includes students enrolled in advanced education courses, irrespective of type of institution attended (e.g. Uni, TAFE, Theological Colleges). (e) Prior to 1981 includes student enrolments. 1981 onwards include net number of students only. (f) From 1982 includes all persons under detention in Adult Corrective Institutions.

## INDUSTRIES

## PASTORAL, DAIRYING, ETC.

Year ended 30 June—	Livestock(a)				Meat(d)					
	Cattle	Sheep	Pigs	Wool	Butter	Cheese	Beef and veal	Mutton and lamb	Pigmeat	Total meat
				(b)(c)						
1902	mil.	mil.	mil.	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes
1912	8.5	72	0.9	245	(e)46	(e)5.3	n.a.	n.a.	n.a.	n.a.
1922	11.8	97	1.1	362	(e)96	(e)7.2	n.a.	n.a.	n.a.	n.a.
1932	14.4	86	1.0	328	(e)121	(e)14.8	345	222	51	618
1942	12.3	111	1.2	457	177	14.3	355	312	72	739
1952	13.6	125	1.4	529	170	30.6	542	378	124	1,043
1960	14.9	118	1.0	490	137	41.3	591	287	86	964
1961	16.5	155	1.4	762	201	45.7	764	583	102	1,449
1962	17.3	153	1.6	737	185	47.9	643	584	109	1,336
1963	18.0	158	1.7	770	202	56.6	804	596	122	1,522
1964	18.5	159	1.4	759	206	59.6	929	603	116	1,648
1965	19.1	165	1.5	810	207	59.2	1,001	595	113	1,710
1966	18.8	171	1.7	809	206	62.6	1,026	594	122	1,743
1967	17.9	158	1.7	754	209	59.6	946	608	135	1,690
1968	18.3	164	1.8	799	222	69.8	879	596	142	1,617
1969	19.2	167	2.1	803	196	70.5	904	665	150	1,718
1970	20.6	175	2.3	883	198	74.8	935	680	162	1,777
1971	22.2	180	2.4	926	223	76.3	1,010	755	174	1,940
1972	24.4	178	2.6	890	203	77.6	1,047	825	182	2,054
1973	27.4	163	3.2	882	195	80.9	1,168	956	194	2,319
1974	29.1	140	3.3	735	185	93.4	1,438	713	236	2,388
1975	30.8	145	2.5	701	175	95.8	1,322	467	211	2,000
1976	32.8	152	2.2	793	(f)161	(f)98.6	1,547	528	175	2,249
1977	33.4	149	2.2	754	148	112.6	1,840	588	174	2,602
1978	31.5	135	2.2	703	118	103.5	1,988	549	185	2,722
1979	29.3	131	2.2	677	112	115.7	2,184	514	199	2,897
1980	27.1	134	2.3	704	105	141.8	2,018	491	199	2,708
1981	26.2	136	2.5	709	84	154.2	1,564	547	218	2,330
1982	25.2	134	2.4	701	79	136.7	1,467	578	233	2,278
1983	24.6	138	2.4	717	76	153.3	1,576	511	228	2,316
1984	22.5	133	2.5	702	88	158.2	1,542	530	239	2,313
1985	22.2	139	2.5	729	111	161.1	1,338	457	253	2,048
1985p.	22.2	149	2.5	800	114	159.6	1,267	475	258	2,000

(a) At 31 December of previous year for years to 1942, at 31 March thereafter. (b) In terms of greasy. (c) 1901-02 and 1911-12 year ended previous December; then until 1946-47 year ended March; 1947-48 onwards, year ended June. (d) Carcass weight. (e) Year ended previous December. (f) From 1974-75 excludes the production of certain small producers.

INDUSTRIES—continued

AGRICULTURE

Season	Wheat for grain			Oats for grain			Barley for grain			Maize		
	Area	Pro-duction	Average yield	Area	Pro-duction	Average yield	Area	Pro-duction	Average yield	Area	Pro-duction	Average yield
	hectares	tonnes	tonnes	'000 hectares	mil tonnes	tonnes	'000 hectares	mil tonnes	tonnes	'000 hectares	mil tonnes	tonnes
1901 02	2.07	1.05	0.51	187	0.18	0.95	30	0.03	1.14	119	0.18	1.50
1911 12	3.01	1.95	0.65	250	0.17	0.70	47	0.05	0.99	138	0.23	1.65
1921 22	3.93	3.51	0.89	297	0.22	0.74	121	0.14	1.14	124	0.20	1.61
1931 32	5.97	5.18	0.87	439	0.28	0.63	139	0.14	1.03	109	0.18	1.65
1941 42	4.86	4.53	0.93	591	0.40	0.68	317	0.41	1.29	122	0.19	1.55
1951 52	4.20	4.34	1.03	957	0.63	0.65	452	0.50	1.10	69	0.10	1.49
1959 60	4.93	5.39	1.09	1,226	0.85	0.69	963	0.78	0.81	75	0.17	2.28
1960 61	5.44	7.43	1.37	1,472	1.38	0.94	1,145	1.54	1.35	75	0.16	2.12
1961 62	5.96	6.71	1.13	1,253	1.00	0.80	965	0.94	0.98	85	0.19	2.18
1962 63	6.66	8.34	1.25	1,332	1.25	0.94	820	0.90	1.09	85	0.19	2.23
1963 64	6.67	8.91	1.34	1,373	1.24	0.90	815	0.98	1.21	87	0.17	1.96
1964 65	7.25	10.02	1.38	1,415	1.27	0.90	835	1.12	1.34	86	0.17	2.03
1965 66	7.09	7.05	1.00	1,525	1.10	0.72	930	0.95	1.02	80	0.12	1.57
1966 67	8.43	12.67	1.50	1,723	1.94	1.13	1,011	1.40	1.38	82	0.19	2.33
1967 68	9.08	7.55	0.83	1,368	0.72	0.53	1,057	0.83	0.79	81	0.18	2.23
1968 69	10.85	14.80	1.37	1,567	1.71	1.09	1,341	1.65	1.23	67	0.15	2.24
1969 70	9.49	10.55	1.11	1,374	1.25	0.91	1,521	1.70	1.12	80	0.19	2.41
1970 71	6.48	7.89	1.22	1,484	1.61	1.09	2,000	2.35	1.18	85	0.21	2.48
1971 72	7.14	8.61	1.21	1,237	1.28	1.03	2,532	3.66	1.21	78	0.21	2.74
1972 73	7.60	6.59	0.87	995	0.74	0.74	2,140	1.73	0.81	59	0.14	2.34
1973 74	8.95	11.99	1.34	1,182	1.11	0.94	1,894	2.40	1.27	46	0.11	2.32
1974 75	8.31	11.36	1.37	897	0.87	0.97	1,826	2.52	1.38	51	0.13	2.59
1975 76	8.56	11.98	1.40	988	1.14	1.15	2,329	3.18	1.36	47	0.13	2.81
1976 77	8.96	11.80	1.32	995	1.07	1.08	2,321	2.85	1.23	53	0.14	2.72
1977 78	9.95	9.37	0.94	1,076	0.99	0.92	2,803	2.38	0.85	45	0.13	2.87
1978 79	10.25	18.09	1.77	1,359	1.76	1.30	2,785	4.01	1.44	50	0.17	3.38
1979 80	11.15	16.19	1.45	1,123	1.41	1.26	2,482	3.70	1.49	54	0.15	2.79
1980 81	11.28	10.86	0.96	1,093	1.13	1.03	2,451	2.68	1.09	56	0.17	3.06
1981 82	11.88	16.36	1.38	1,388	1.62	1.16	2,685	3.45	1.29	61	0.21	3.48
1982 83	11.52	8.88	0.77	1,212	0.85	0.70	2,452	1.94	0.79	64	0.14	2.17
1983 84	12.93	21.76	1.70	1,772	2.30	1.30	3,109	4.89	1.56	68	0.24	3.48
1984 85p	12.04	18.64	1.55	1,060	1.40	1.32	3,503	5.56	1.59	104	n.y.a.	n.y.a.

Season	Hay			Potatoes			Sugar-cane (a)			Vineyards		All crops
	Area	Pro-duction	Average yield	Area	Pro-duction	Average yield	Area	Pro-duction	Average yield	Area	Wine made	Area
	'000 hectares	'000 tonnes	tonnes	'000 hectares	'000 tonnes	tonnes	'000 hectares	'000 tonnes	tonnes	'000 hectares	mil. litres	mil. hectares
1901 02	683	2,057	3.01	44	328	7.4	35	39.5	26	24	3.4	
1911 12	1,019	2,914	2.86	53	306	5.8	41	1,709	41.8	25	23	4.9
1921 22	1,212	3,965	3.27	60	394	6.5	52	2,476	47.7	37	39	6.2
1931 32	1,066	3,218	3.02	59	403	6.9	98	4,281	43.8	46	65	8.6
1941 42	1,116	3,632	3.25	40	338	8.4	103	5,236	50.8	53	71	(b)8.3
1951 52	627	2,382	3.80	48	517	10.8	114	5,412	47.5	55	160	(b)8.1
1959 60	852	3,227	3.79	44	589	13.4	127	9,147	72.0	53	129	10.6
1960 61	1,203	5,160	4.29	37	458	12.3	138	9,313	67.5	53	153	12.0
1961 62	920	3,752	4.08	38	534	14.0	157	9,730	62.1	54	190	12.0
1962 63	1,101	4,793	4.35	46	677	14.7	163	12,940	79.6	54	136	13.0
1963 64	1,053	4,338	4.12	41	571	13.8	169	12,313	72.9	55	172	13.0
1964 65	1,130	5,043	4.46	36	516	14.5	190	15,312	80.4	56	177	14.0
1965 66	1,125	4,246	3.77	39	649	16.7	204	14,382	70.6	57	156	14.0
1966 67	1,415	6,473	4.58	40	653	16.3	226	16,953	75.1	56	190	16.0
1967 68	502	1,246	2.48	43	669	15.6	224	17,025	76.1	57	202	14.6
1968 69	428	1,728	4.04	46	811	17.7	230	18,708	81.3	58	236	16.7
1969 70	428	1,514	3.54	43	762	17.6	213	15,784	74.2	61	288	15.7
1970 71	348	1,298	3.73	39	774	20.1	221	17,645	80.0	64	250	13.4
1971 72	340	1,246	3.66	40	822	20.3	234	19,391	83.0	67	289	14.2
1972 73	453	1,224	2.70	37	721	19.7	242	18,928	78.3	69	266	14.3
1973 74	325	1,034	3.18	34	649	19.0	226	19,278	85.4	60	295	15.1
1974 75	216	669	3.10	38	742	19.7	253	20,418	80.7	71	361	13.8
1975 76	230	738	3.21	33	696	20.9	257	21,959	85.5	70	356	14.5
1976 77	287	891	3.10	34	728	21.5	288	23,344	81.0	71	383	15.0
1977 78	313	795	2.54	36	772	21.4	295	23,493	79.6	71	340	16.8
1978 79	293	955	3.26	35	795	23.0	252	21,457	85.2	71	335	17.4
1979 80	265	819	3.09	37	857	23.4	267	21,510	79.2	70	414	18.0
1980 81	320	826	2.58	36	866	24.2	288	23,976	83.2	70	374	18.3
1981 82	380	1,033	2.72	36	919	25.4	316	25,094	79.4	68	403	19.6
1982 83	408	879	2.15	37	858	23.0	318	24,817	77.9	66	340	19.4
1983 84	377	1,248	3.31	38	1,020	26.9	307	24,191	79.0	65	396	22.0
1984 85	261	848	3.25	38	NYA	NYA	316	25,448	80.53	65	NYA	21.0

(a) Cane cut for crushing. (b) Excludes Northern Territory.

## INDUSTRIES—Continued

## GROSS VALUE OF PRODUCTION OF PRIMARY INDUSTRIES

Year ended 30 June—	Crop production		Pastoral	Dairying	Poultry	Bee- farming	Total agri- culture	Hunting	Forestry	Fishing	Total primary excluding mining
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1902 . . . . .	47.6	54.4	15.2	4.0	0.2	121.4	n.a.	(a) 5.6	(b)	127.0	
1912 . . . . .	77.6	105.4	32.2	8.0	0.2	223.4	n.a.	9.6	2.2	235.2	
1922 . . . . .	163.8	150.2	70.6	18.0	0.2	402.8	n.a.	18.2	2.8	423.8	
1932 . . . . .	149.0	123.1	66.1	17.1	0.2	355.5	3.2	15.4	3.3	377.4	
1942 . . . . .	201.0	198.7	91.1	24.8	0.9	516.4	10.8	23.3	4.2	554.7	
1952 . . . . .	664.3	899.6	260.6	97.0	1.7	1,923.3	14.8	82.7	13.3	2,034.1	
1960 . . . . .	820.7	1,275.2	425.4	119.7	5.1	2,646.1	15.4	108.1	27.2	2,796.8	
1961 . . . . .	1,071.4	1,130.6	409.5	130.2	3.8	2,745.4	14.8	108.4	28.5	2,897.1	
1962 . . . . .	1,008.3	1,187.3	412.5	121.7	4.0	2,733.9	13.3	100.1	31.7	2,879.0	
1963 . . . . .	1,136.6	1,287.1	439.4	123.6	3.5	2,990.2	12.8	101.6	34.1	3,138.7	
1964 . . . . .	1,228.4	1,562.7	463.5	138.2	6.0	3,398.9	15.0	108.0	35.4	3,557.3	
1965 . . . . .	1,320.0	1,454.5	505.3	137.4	5.1	3,422.3	14.6	116.3	42.4	3,595.6	
1966 . . . . .	1,181.3	1,467.8	508.0	154.6	4.3	3,316.0	15.6	120.3	45.8	3,497.7	
1967 . . . . .	1,639.3	1,486.1	523.8	171.6	4.0	3,824.7	13.5	117.7	48.8	4,004.7	
1968 . . . . .	1,268.8	1,395.2	504.1	169.3	4.6	3,342.1	12.1	118.8	58.5	3,531.5	
1969 . . . . .	1,717.3	1,536.8	513.7	176.2	3.0	3,947.0	12.1	119.5	63.0	4,141.6	

(a) Includes Fishing. (b) Included in Forestry.

The classification categories 'Pastoral', 'Dairying', 'Poultry' and 'Bee-farming' employed in the previous table have been replaced by a more appropriate commodity classification. Direct comparison with figures for previous years is not possible.

## GROSS VALUE OF PRODUCTION OF PRIMARY INDUSTRIES

Year ended 30 June—	Livestock slaughtering and other disposals (a)		Livestock products	Total agriculture	Forestry	Fishing	Hunting
	Crops						
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1970 . . . . .	1,453.8	1,007.7	1,268.6	3,730.1	125.0	63.3	12.5
1971 . . . . .	1,490.8	1,009.9	1,079.0	3,579.7	137.2	77.2	10.2
1972 . . . . .	1,597.6	1,134.4	1,235.6	3,967.7	151.2	92.1	10.2
1973 . . . . .	1,582.4	1,542.2	1,832.5	4,957.1	170.6	100.7	12.1
1974 . . . . .	2,858.7	1,696.0	1,857.0	6,411.7	193.3	109.3	12.5
1975 . . . . .	3,203.8	1,019.2	1,653.1	5,876.0	212.6	107.7	13.8
1976 . . . . .	3,248.2	1,246.4	1,678.1	6,172.7	227.1	146.6	18.0
1977 . . . . .	3,189.7	1,685.7	1,881.2	6,756.6	251.7	206.3	23.5
1978 . . . . .	3,047.0	1,954.4	1,970.4	6,971.8	263.4	233.4	27.1
1979 . . . . .	4,912.5	3,097.7	2,214.5	10,224.7	276.8	279.7	38.1
1980 . . . . .	5,540.8	3,658.8	2,564.3	11,763.9	357.4	317.5	38.0
1981 . . . . .	5,305.9	3,474.3	2,803.8	11,584.1	(b)	(b)	(b)
1982 . . . . .	6,311.9	3,295.6	3,100.6	12,708.2	..	..	..
1983 . . . . .	5,010.3	3,452.2	3,245.8	11,702.4	..	..	..
1984 . . . . .	8,434.7	3,392.8	3,489.8	15,317.2	..	..	..
1985p . . . . .	8,132.9	3,562.1	3,726.4	15,421.4	..	..	..

(a) Includes adjustment for net exports (overseas and interstate) of live animals. (b) No longer collected. 1979-80 final year.

INDUSTRIES—continued

Year ended 31 December (1901-1968) 30 June (1969 onwards)—	MINERALS								FORESTRY				
	Copper (a)	Gold (a)	Lead (a)	Zinc (a)	Iron ore	Black coal	Brown coal	Crude oil	Year ended 30 June—	Sawn output of Aust. grown timber	Wood chips (f)		
											Hard- wood (g)	Soft- wood (h)	
'000 tonnes	kg	'000 tonnes	'000 tonnes	mil. tonnes	mil. tonnes	mil. tonnes	'000 cu m	'000 cu m	'000 tonnes	'000 tonnes			
1901.	29.9	102,642	n.a.	(b)	n.a.	7.0	..	1902	..	(c) 1,067	..	..	
1911.	46.1	77,263	225.3	241.9	(b)	10.7	..	1902	..	(c) 1,428	..	..	
1921.	11.2	23,577	82.3	141.7	0.7	13.1	..	1922	..	1,392	..	..	
1931.	13.9	18,510	150.8	75.4	(b)	10.8	..	1932	..	559	..	..	
1941.	22.7	46,553	295.7	251.2	2.5	19.1	..	1942	..	2,157	..	..	
1951.	18.4	27,855	215.4	192.3	2.5	25.9	..	1952	..	3,287	..	..	
1960.	111.2	33,800	313.1	322.6	4.4	38.1	..	1961	..	3,346	..	..	
1961.	97.2	33,476	274.0	316.2	5.4	40.9	..	1962	..	3,190	..	..	
1962.	108.7	33,245	376.0	342.9	4.9	42.3	..	1963	..	3,341	..	..	
1963.	114.8	31,849	416.9	357.1	5.6	44.0	..	1964	..	3,509	..	..	
1964.	105.7	29,979	380.9	350.1	5.8	47.2	198	1965	..	3,615	..	..	
1965.	91.8	27,298	367.9	354.8	6.8	52.9	417	1966	..	3,558	..	..	
1966.	111.3	28,521	370.8	375.3	11.1	56.0	539	1967	..	3,448	..	..	
1967.	91.8	25,049	381.8	407.0	17.3	59.0	1,208	1968	..	3,476	..	..	
1968.	109.6	24,316	388.8	422.4	26.6	64.2	2,206	1969	..	(d) 3,325	..	..	
1969.	125.3	22,711	417.7	463.2	32.5	43.3	23.1	2,237	1970	..	(d) 3,386	..	
1970.	142.3	20,605	459.4	520.8	45.1	48.5	23.9	4,871	1971	..	3,438	..	
1971.	173.0	19,103	416.4	444.1	57.1	49.7	22.8	14,937	1972	..	3,367	..	
1972.	171.9	23,253	420.8	497.5	62.1	53.5	23.3	19,038	1973	..	3,408	2,361	84
1973.	198.7	20,002	385.0	507.0	74.6	59.8	24.1	20,669	1974	..	3,336	2,952	118
1974.	246.7	16,271	370.4	441.3	91.5	59.3	26.3	23,096	1975	..	3,230	3,009	137
1975.	235.6	15,153	416.5	508.2	98.2	70.1	27.3	23,096	1976	..	3,228	2,603	195
1976.	218.3	16,901	396.7	479.3	92.7	69.3	29.2	23,839	1977	..	3,164	3,623	269
1977.	217.2	15,666	418.2	475.3	94.8	76.0	31.0	24,549	1978	..	3,056	3,668	241
1978.	217.1	21,047	418.8	484.4	89.9	79.3	30.5	24,941	1979	..	3,110	3,800	229
1979.	238.7	19,584	423.5	498.5	84.6	81.2	32.1	24,839	1980	..	3,279	4,798	352
1980.	235.1	18,272	n.p.	518.0	97.0	81.2	32.9	23,647	1981	..	3,407	4,410	588
1981.	246.4	15,991	381.4	481.9	93.8	96.1	32.1	23,053	1982	..	3,276	3,943	604
1982.	259.6	22,328	454.8	623.9	86.8	99.4	37.6	(e) 22,378	1983	..	2,984	4,031	635
1983.	235.3	25,825	n.p.	n.p.	79.0	107.6	35.0	(e) 22,069	..	..	..	..	..
1984.	249.3	33,881	n.p.	n.p.	76.5	116.1	33.2	(e) 26,826	1984	..	2,817	4,551	n.y.a.

(a) Metallic content of minerals produced. (b) Less than 0.05. (c) Year ended previous December. (d) Excludes estimated quantity of timber from logs peeled or sliced for veneers. (e) Includes natural gas condensate. (f) Green weight. (g) Broad leaved. (h) Coniferous.

FACTORIES (a)

Year ended 30 June—	Net value of production (d)											
	Number	Persons employed (b)	Salaries and wages paid (c)	Chemicals, etc.	Indus- trial metals, etc.	Textiles, etc.	Clothing	Food, etc.	Paper, etc.	All groups		
	'000 (f)	'000 (f)	\$m (f)	\$m n.a.	\$m n.a.	\$m n.a.	\$m n.a.	\$m n.a.	\$m n.a.	\$m n.a.		
1902(e)	14.5	312	55	2.2	24.1	15.0	..	23.6	8.5	108.3		
1912	18.0	379	136	6.4	47.2	38.4	..	54.4	18.0	225.0		
1932	21.7	337	112	15.8	45.6	13.8	22.2	57.4	19.2	222.0		
1942	27.0	725	360	59.6	239.8	42.0	47.2	106.4	34.2	633.0		
1952	45.8	978	1,224	127.4	826.2	113.2	162.2	282.2	136.4	2,049.7		
1960	56.7	1,132	2,173	360.3	1,700.4	216.7	237.7	520.1	298.2	4,161.1		
1961	57.8	1,145	2,289	366.1	1,795.9	213.6	247.2	542.5	318.6	4,349.8		
1962	58.5	1,121	2,287	364.3	1,770.3	211.2	252.4	495.5	326.9	4,394.6		
1963	59.1	1,168	2,447	411.4	1,954.7	233.8	266.3	636.9	350.9	4,795.2		
1964	59.4	1,210	2,652	449.5	2,174.0	252.5	281.4	700.5	379.7	5,270.0		
1965	61.0	1,269	2,994	504.8	2,486.1	279.6	302.3	757.1	426.9	5,896.8		
1966	61.7	1,294	3,163	542.7	2,647.8	282.8	319.0	818.3	459.5	6,251.9		
1967	62.5	1,309	3,408	627.6	2,912.9	303.1	341.5	892.3	503.3	6,877.0		
1968	63.0	1,331	3,666	687.0	3,163.6	315.0	360.1	937.5	549.0	7,430.9		
1969(g)	35.9	1,264	3,908	633.0	3,201.6	301.0	409.2	1,184.4	620.7	7,475.5		
1970	35.7	1,297	4,329	681.8	3,551.9	310.3	452.1	1,321.9	701.8	8,261.7		
1971	..	..	..	No manufacturing census was conducted in respect of this year.							..	..
1972	36.1	1,303	5,257	804.1	4,052.0	333.7	521.5	1,683.9	818.1	9,703.2		
1973	36.4	1,298	5,820	885.5	4,337.7	376.8	563.9	1,943.5	915.4	10,746.0		

For footnotes see end of table.



## FACTORIES (a)—continued

Year ended 30 June—	Net value of production (d)										
	Number	Persons employed (b)	Salaries and wages paid(c)	Chemicals, etc.	Industrial metals, etc.	Textiles, etc.	Clothing	Food etc.	Paper etc.	All groups	
											'000
1974		37.1	1,338	7,177	1,076.2	5,529.4	481.1	676.1	2,126.0	1,110.5	13,149.2
1975(h)		27.0	1,245	8,531	1,172.2	6,635.8	409.2	696.8	2,650.5	1,279.4	15,246.4
1976(h)		27.5	1,200	9,472	1,261.7	7,084.9	542.3	841.7	3,074.1	1,391.4	16,921.0
1977(h)		26.8	1,176	10,536	1,464.6	8,088.5	563.1	894.2	3,501.8	1,614.2	19,234.3
1978(h)		26.1	1,144	11,136	1,697.4	8,217.9	581.4	967.7	3,767.4	1,763.0	20,236.3
1979(h)		26.3	1,144	11,966	1,898.8	9,180.2	641.5	1,049.4	4,035.5	1,960.8	22,230.1
1980(h)		27.4	1,154	13,358	2,201.4	10,887.8	708.4	1,130.7	4,413.8	2,248.4	25,614.0
1981(h)		27.7	1,150	14,911	2,513.3	11,843.8	769.4	1,267.1	5,023.5	2,568.1	28,531.1
1982		28.7	1,155	17,001	2,766.6	12,996.3	855.6	1,380.2	5,324.8	2,984.2	31,377.7
1983		27.7	1,053	17,403	2,834.5	12,245.9	805.4	1,354.8	5,903.1	3,071.7	31,035.5
1984		27.5	1,009	17,461	3,106.0	13,306.8	898.2	1,548.7	6,511.7	3,381.3	34,229.3

(a) Excludes Northern Territory and Australian Capital Territory before 1 July 1964. (b) Average over whole year, includes working proprietors. (c) Excludes amounts drawn by working proprietors. (d) Value added in process of manufacture (i.e. value of output less value of materials and fuel used). (e) Year ended previous December. (f) Owing to variation in classification, effective comparison is not possible. (g) Direct comparison with figures for previous years are not possible (for details, see Chapter 17). (h) All manufacturing establishments owned by multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed.

## INDUSTRIES, WAGES AND PRICES

Year ended 30 June—	GROSS VALUE OF PRODUCTION		BUILDING			WAGES AND PRICES			
	Mining and quarrying	Manu- facturing	New dwellings completed(a)	Value of work done on all buildings(b)		Year ended 31 December—	Weekly wage rates index adult males(c)	Award rates of pay index: adult males(d)	Retail price index numbers six State capital cities combined(e)
				Number	\$m				
1902	\$m	\$m	'000	\$m	\$m	1901			47
1912	44.0	(f)58.2	n.a.	n.a.	n.a.	1911			53
1922	46.6	(f)108.3	n.a.	n.a.	n.a.	1921			(i)90
1932	40.0	225.0	n.a.	n.a.	n.a.	1931			78
1942	27.0	220.0	n.a.	n.a.	n.a.	1941			89
	66.8	633.0	n.a.	n.a.	n.a.	1951			167
1952	194.4	2,049.7	80.1	354.1	n.a.				
1960	252.3	4,161.1	90.0	571.0	1,001.6	1960	125.7		245
1961	278.1	4,349.8	94.5	627.4	1,130.8	1961	129.5		252
1962	274.5	4,394.6	86.3	593.2	1,076.9	1962	129.8		251
1963	291.0	4,795.2	87.7	610.2	1,140.7	1963	133.0		252
1964	327.7	5,270.0	96.7	685.8	1,323.9	1964	140.4		258
1965	400.1	5,896.8	112.7	823.0	1,555.9	1965	144.3		268
1966	443.9	6,251.9	112.8	869.9	1,681.2	1966	152.4		276
1967	515.5	6,877.0	111.9	914.8	1,745.4	1967	159.3		286
1968	568.1	7,430.9	120.2	1,022.8	1,914.3	1968	173.4		293
1969	(g)749.2	(g)7,348.8	130.7	1,182.1	2,195.4	1969	183.6		302
1970	(g)1,042.6	(g)8,137.1	142.2	1,379.4	2,556.7	1970	191.9		313
1971	(g)1,289.5	(h)n.a.	142.1	1,478.9	2,815.6	1971	218.0		332
1972	(g)1,428.3	(g)9,508.1	143.8	1,628.7	3,132.4	1972	239.8		352
1973	(g)1,597.3	(g)10,508.5	150.6	1,845.5	3,542.4	1973	275.1		385
1974	(g)1,996.1	(g)12,886.3	150.0	2,143.0	4,214.9	1974	373.8		443
1975	(g)2,669.1	(g)15,060.7	141.1	2,454.2	4,713.3	1975	416.8		510
1976	(g)3,049.7	(g)16,555.8	132.0	2,808.6	5,595.0	1976	478.1	104.3	579
1977	(g)3,548.2	(g)18,816.1	144.8	3,635.1	6,445.5	1977	526.8	114.5	650
1978	(g)3,905.0	(g)19,754.4	128.9	3,595.7	6,510.0	1978	569.9	123.3	702
1979	(g)3,875.1	(g)22,230.1	117.1	3,529.7	6,946.4	1979	597.7	129.9	766
1980	(g)5,483.3	(g)25,614.0	129.3	4,174.9	8,018.2	1980	662.5	144.8	844
1981	(g)6,224.4	(g)28,594.1	135.9	4,875.8	10,026.3	1981	765.4	166.7	926
1982	(g)6,697.7	(g)31,548.7	138.3	5,808.2	10,547.7	1982	n.a.	185.4	1,028
1983	(g)8,146.6	(g)31,035.5	115.7	5,177.9	10,550.6	1983	n.a.	194.7	1,132
1984	(g)8,825.4	(g)34,229.3	123.8	5,508.1	10,268.5	1984	n.a.	203.2	1,177

(a) Series commenced 1945-46. Partly estimated before July 1951, and excludes Northern Territory before July 1954. (b) Building by private contractors, government authorities and owner builders. (c) At 31 December. Base year 1954=100, weighted average for 'wage' earners only. Excludes rural industry. Series replaced by Award Rates of Pay Indexes from September 1982. (d) At 31 December. Base: June 1976=100.0. Excludes ASIC Division A Agriculture, forestry, fishing and hunting; ASIC sub-division 72-Defence forces and ASIC sub-division 94-Private households employing staff. This series shows index numbers for both wage and salary earners (i.e. all employees). (e) Base year 1945=100. The index numbers are presented as a continuous series, but they give only a broad indication of long-term trends in retail price levels. They are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are: from 1901 to 1914, the 'A' Series Retail Price Index; from 1914 to 1946-47, the 'C' Series Retail Price Index; from 1946 47 to 1948 49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding Rent; and from 1948 49 onwards, the Consumer Price Index. (f) Year ended previous December. (g) Value added from 1968-69. (h) Manufacturing census was not conducted. (i) November.

TRANSPORT AND COMMUNICATION

SHIPPING

Year ended 30 June—	Ships on overseas voyages				Overseas cargo	
	Arrivals		Departures		Discharged	Loaded
	No.	Net tonnage	No.	Net tonnage		
		mil. tons		mil. tons	mil. revenue tonnes (c)	mil. revenue tonnes (c)
1902	(a)	(a)	(a)	(a)	n.a.	n.a.
1912(b)	2,081	5.0	2,093	5.0	n.a.	n.a.
1922	1,567	4.6	1,544	4.5	2.4	5.8
1932	1,519	5.7	1,538	5.7	3.1	6.8
1942	1,276	5.2	1,268	5.6	5.8	4.4
1952	2,038	9.0	2,098	9.3	15.2	6.0
1961	3,382	17.3	3,396	17.0	21.8	15.8
1962	3,599	18.9	3,611	18.8	20.9	19.3
1963	3,411	19.0	3,351	18.6	23.6	17.5
1964	3,714	20.7	3,763	20.9	25.6	22.2
1965	3,813	21.7	3,788	21.7	28.6	23.0
1966	3,929	23.0	4,029	23.3	29.2	24.4
1967	3,977	27.4	4,017	27.6	32.2	35.4
1968	3,972	30.1	4,013	30.3	33.3	44.4
1969	4,390	36.4	4,360	36.2	35.7	58.1
1970	4,971	44.5	5,053	44.6	34.5	80.5
1971	5,476	50.8	5,578	51.4	27.5	104.8
1972	5,439	53.1	5,447	53.5	25.4	111.2
1973	5,647	62.6	5,631	62.0	26.3	135.9
1974	5,975	72.0	5,909	71.5	30.7	153.6
1975	6,230	80.3	5,254	80.3	29.9	167.8
1976	5,772	75.0	5,824	75.4	26.9	158.6
1977	5,830	79.7	5,823	79.5	28.4	167.1
1978	5,615	80.2	5,668	80.4	27.0	166.7
1979	5,677	82.8	5,655	82.5	28.7	167.3
1980	6,249	(d)247.2	6,168	(d)246.6	31.0	188.7
1981	5,965	236.7	5,884	234.1	32.5	179.3
1982	5,839	232.4	5,798	235.6	31.3	176.4
1983	5,516	223.8	5,706	230.4	27.9	170.4
1984	6,131	263.6	6,026	267.3	28.5	198.4

(a) Separate details not available. Total entrances and clearances for year ended December 1901, 4,028 ships, 6.5 million tons. (b) Year ended previous December. (c) Tons weight plus tons measurement. (d) Net tonnage replaced by dead weight tonnage as from July 1, 1979.

GOVERNMENT RAILWAYS (a)

REGULAR INTERNAL AIR SERVICES

Year ended June 30—	GOVERNMENT RAILWAYS (a)				REGULAR INTERNAL AIR SERVICES								
	Route kilo-metres (b)	Train kilo-metres	Pas-senger journeys	Freight-tonnes carried	Passengers				Freight		Mail		
					Freight net tonne-kilo-metres	Kilo-metres flown	Embark-ations	Pas-senger kilo-metres	Tonnes up-lifted	Tonne-kilo-metres	Tonnes up-lifted	Tonne-kilo-metres	
	'000	mil.	mil.	mil.	mil.	mil.	mil.	'000	mil.	'000	mil.	'000	mil.
1902	20.6	61.5	115	15.7	n.a.	..	..	..	..	..	..	..	..
1912	27.0	88.8	228	25.9	n.a.	..	..	..	..	..	..	..	..
1922	37.7	90.3	335	32.0	n.a.	..	..	..	..	..	..	..	..
1932	43.5	102.7	303	26.5	n.a.	1.4	6	5	..	n.a.	..	..	n.a.
1942	43.8	142.4	475	39.5	n.a.	12.6	151	122	1.2	1.5	n.a.	0.7	0.7
1952	43.1	150.3	501	45.0	11,046	67.3	1,829	1,162	52.2	39.0	2.4	1.9	1.9
1960	42.2	140.2	479	52.0	13,091	69.5	2,660	1,823	59.3	42.6	4.4	3.8	3.8
1961	42.0	149.7	463	56.3	14,370	68.1	2,639	1,786	57.2	41.2	5.4	4.5	4.5
1962	41.2	149.0	461	56.5	14,427	66.3	2,666	1,802	51.9	38.1	5.7	4.7	4.7
1963	41.0	149.6	465	56.8	15,131	70.3	2,833	1,965	53.9	41.3	5.9	4.9	4.9
1964	40.5	155.3	471	62.7	17,170	78.8	3,257	2,266	57.3	44.5	6.4	5.5	5.5
1965	40.3	155.5	464	65.9	18,224	84.2	3,764	2,638	63.5	49.5	7.0	5.9	5.9
1966	40.2	151.7	460	65.5	18,050	88.5	4,158	2,947	69.0	54.9	7.8	6.7	6.7
1967	40.3	150.8	455	69.6	18,832	91.3	4,425	3,174	74.4	58.6	8.7	7.5	7.5
1968	40.5	152.1	453	72.2	20,034	91.3	4,668	3,420	77.2	61.8	8.5	7.6	7.6
1969	40.4	151.0	447	77.0	21,463	97.1	5,185	3,865	81.6	66.5	9.0	8.0	8.0
1970	40.3	156.3	450	83.7	23,973	106.6	5,911	4,511	90.8	74.5	9.6	8.7	8.7
1971	40.3	156.3	453	87.3	25,206	114.6	6,340	4,974	91.4	78.0	9.9	9.3	9.3
1972	40.3	153.7	404	88.7	25,403	113.0	6,629	5,134	89.9	74.2	10.1	9.3	9.3
1973	40.5	152.0	372	92.5	26,582	118.6	7,503	5,685	94.4	81.5	10.1	9.8	9.8
1974	40.4	151.2	373	97.0	28,329	131.8	8,858	6,812	112.7	98.3	9.9	9.3	9.3
1975	40.6	150.6	361	103.5	29,792	135.5	9,393	7,374	107.8	97.9	9.6	9.0	9.0
1976	40.8	150.1	338	104.4	30,809	130.1	9,315	7,281	106.1	97.5	9.7	9.1	9.1
1977	40.1	151.1	332	109.9	31,995	122.9	9,349	7,330	108.1	96.3	9.6	9.1	9.1
1978	39.7	148.8	323	107.3	31,837	134.7	10,289	8,181	120.9	106.5	11.3	10.7	10.7
1979	39.4	147.5	375	111.1	32,056	135.4	10,724	8,619	127.5	110.7	13.1	12.5	12.5
1980	39.5	150.9	401	125.7	36,366	138.2	11,505	9,486	129.8	109.6	15.1	14.2	14.2
1981	39.1	147.1	412	127.3	36,468	137.3	11,381	9,747	125.0	107.9	17.3	16.4	16.4
1982	38.9	150.5	412	127.3	37,332	136.8	11,397	10,155	136.3	117.9	16.8	16.5	16.5
1983	39.1	147.8	413	124.1	34,494	128.0	10,333	9,327	141.9	124.8	16.8	17.2	17.2
1984	nya	nya	nya	nya	nya	126.1	10,598	9,685	149.9	137.8	17.6	17.6	17.6

(a) Particulars of train-kilometres, passenger journeys, freight tonnes carried, and freight net tonne-kilometres refer only to operations for which revenue is received. (b) At end of period.

## TRANSPORT AND COMMUNICATION—continued

Year ended 30 June—	ROAD TRANSPORT					COMMUNICATION					
	Tram trolley- bus and bus services (a)	Motor vehicles on the register				Telephones			Broadcasting and television licences in force (b)		
		Passenger journeys	Motor cars and station wagons	Com- mercial vehicles (c)	Motor cycles	Total motor vehicles (including motor cycles)	Postal matter dealt with (d)	Instru- ments in service (b)	Services in operation (b) (e)	Tele- grams (f)	Broad- cast listeners <sup>1</sup>
	mil.	'000	'000	'000	'000	mil. articles	'000	'000	mil.	'000	'000
1902 . . . . .	n.a.	..	..	..	..	(g)384	(g)36	(g)28	(g)8.2	..	..
1912 . . . . .	360	n.a.	n.a.	n.a.	n.a.	(g)698	(g)118	(g)96	(g)13.9	..	..
1922 . . . . .	569	102	—	38	139	778	259	196	16.8	(h)1	..
1932 . . . . .	589	420	96	72	588	887	485	364	13.9	369	..
1942 . . . . .	(i)1,067	451	250	50	751	1,124	739	531	26.1	1,320	..
1952 . . . . .	1,019	1,028	588	155	1,770	1,482	1,301	939	29.8	1,961	..
1960 . . . . .	758	1,938	784	102	2,824	1,953	2,164	1,562	22.2	2,283	955
1961 . . . . .	726	2,070	800	93	2,963	2,048	2,266	1,631	21.8	2,256	1,217
1962 . . . . .	718	2,201	815	85	3,101	2,101	2,382	1,719	21.6	2,220	1,424
1963 . . . . .	712	2,377	832	77	3,286	2,202	2,523	1,812	21.8	2,240	1,655
1964 . . . . .	702	2,583	846	69	3,498	2,342	2,670	1,919	23.4	2,302	1,882
1965 . . . . .	685	2,792	858	65	3,715	2,443	2,811	2,010	24.3	2,358	2,045
1966 . . . . .	653	2,947	868	64	3,878	2,556	2,978	2,120	25.0	2,526	2,226
1967 . . . . .	621	3,104	880	69	4,053	2,683	3,178	2,235	25.6	2,538	2,405
1968 . . . . .	609	3,305	892	83	4,279	2,648	3,392	2,359	(j)23.4	2,580	2,519
1969 . . . . .	590	3,499	911	98	4,508	2,648	3,599	2,511	(j)23.3	2,630	2,649
1970 . . . . .	575	3,720	938	114	4,772	2,664	3,913	2,704	(j)23.2	2,670	2,758
1971 . . . . .	561	3,935	961	144	5,039	2,685	4,152	2,857	(j)21.2	2,699	2,845
1972 . . . . .	503	4,141	996	180	5,317	2,649	4,400	2,978	(j)20.2	2,758	2,939
1973 . . . . .	521	4,362	1,041	210	5,613	2,691	4,659	3,147	(j)20.4	2,814	3,013
1974 . . . . .	533	4,604	1,090	259	5,953	2,656	5,000	3,361	(j)20.7	(k)2,851	(k)3,022
1975 . . . . .	531	4,859	1,140	278	6,277	2,516	5,267	3,539	(j)18.5	..	..
1976 . . . . .	515	5,073	1,215	293	6,581	2,209	5,502	3,700	(j)12.9	..	..
1977 . . . . .	514	5,243	1,280	296	6,818	2,198	5,835	3,907	(j)10.4	..	..
1978 . . . . .	516	5,462	1,360	292	7,115	2,304	6,181	4,166	9.0	..	..
1979 . . . . .	(l)459	5,657	1,413	288	7,358	2,505	6,677	4,449	7.1	..	..
1980 . . . . .	(l)456	5,801	1,462	310	7,573	2,631	7,153	4,743	5.4	..	..
1981 . . . . .	(l)448	6,021	1,544	352	7,918	2,767	7,684	5,069	5.1	..	..
1982 . . . . .	(l)447	6,294	1,662	391	8,346	2,877	8,055	5,357	4.5	..	..
1983 . . . . .	(m)326	6,470	1,718	402	8,590	2,944	8,267	5,592	4.1	..	..
1984 . . . . .	n.y.a.	6,636	1,798	398	8,833	3,035	8,329	5,851	3.7	..	..
1985 . . . . .	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	3,148	8,727	6,188	3.4	..	..

(a) Government and municipal trolley-bus services ceased in August 1969. (b) At end of period. (c) Open and closed light commercial type vehicles; utilities and panel vans, rigid and articulated trucks, other truck type vehicles and buses. (d) Letters, postcards, letter-cards, newspapers, packets, parcels, and registered articles. (e) All single lines plus one half the number of duplex lines. Until the introduction of duplex services in December 1948, statistics of exchange lines and telephone services were identical. (f) Telegrams despatched to places within Australia and despatched to or received from overseas. (g) Year ended previous December. (h) Year 1923-24. First year licences issued. (i) Tram passenger journeys only before 1942. (j) Excludes telegrams received from overseas. These particulars are no longer available. (k) Television viewer and broadcast listener's licences were abolished on 17 September 1974. (l) Excludes details for South Australia, which are no longer separately identifiable from the railway operations of the State Transport Authority. (m) Excludes details for Victoria and South Australia.

NOTE ISSUE	PRIVATE FINANCE			BANKING	
	Australian notes on issue (a)	Trading banks		Debits to customers' accounts (b)	Savings banks Depositors' balances (c)
		Advances (b)	Deposits (b)		
June—	\$m	\$m	\$m	\$m	\$m
1960	843	2,211	3,611	1,737	3,045
1961	839	2,238	3,600	1,654	3,155
1962	856	2,287	3,837	1,848	3,470
1963	869	2,465	4,064	2,028	3,940
1964	870	2,610	4,649	2,318	4,476
1965	862	2,955	5,038	2,653	4,887
1966	849	3,183	5,308	2,660	5,254
1967	938	3,548	5,614	2,964	5,765
1968	1,006	4,020	6,087	3,572	6,222
1969	1,107	4,384	6,706	4,035	6,707
1970	1,216	4,903	7,099	4,861	7,105
1971	1,369	5,317	7,431	5,668	7,635
1972	1,499	5,876	8,322	6,146	8,391
1973	1,758	7,755	11,013	8,035	10,238
1974	2,146	10,120	12,714	8,988	11,196
1975	2,557	11,205	14,937	10,095	(e) 12,869
1976	2,921	12,576	16,955	13,368	14,823
1977	3,291	14,006	19,089	14,879	16,365
1978	3,670	15,683	19,746	17,624	18,046
1979	4,107	17,653	22,179	20,555	19,832
1980	4,586	20,386	25,643	24,730	21,261
1981	5,187	22,998	29,306	28,334	23,218
1982	5,837	(d) 26,213	33,503	41,081	25,047
1983	6,362	28,687	36,044	42,417	30,006
1984	7,205	31,751	38,424	60,713	34,328
1985	8,182	39,173	47,109	85,243	38,866

(a) Last Wednesday in June. (b) Weekly average for month of June. (c) End of June. (d) Break in series due to a change in accounting procedures. The figure for June 1981 on the new basis is \$23,071 million. (e) From June 1975 break in series due to a change in accounting procedures by one bank.

PUBLIC FINANCE

Year ended 30 June—	COMMONWEALTH GOVERNMENT			STATE		ALL PUBLIC AUTHORITIES		
	Consolidated revenue fund		Taxation collections	Consolidated revenue fund		Taxation collections	General government final consumption expenditure	Public gross fixed capital expenditure (b)
	Revenue	Expenditure		Revenue	Expenditure			
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	
1902	23	8	18	56	58	5	..	..
1912	41	29	32	83	82	11	..	..
1922	128	128	99	170	175	36	..	..
1932	143	143	109	199	242	65	..	..
1942	420	420	362	305	299	115	..	..
1952	2,034	2,034	1,848	777	783	126	803	806
1960	2,877	2,877	2,519	1,399	1,404	320	1,319	1,214
1961	3,277	3,277	2,871	1,511	1,513	335	1,430	1,256
1962	3,283	3,283	2,858	1,609	1,617	394	1,528	1,380
1963	3,371	3,371	2,907	1,694	1,696	438	1,628	1,434
1964	3,809	3,809	3,247	1,829	1,829	496	1,827	1,586
1965	4,418	4,418	3,819	1,947	1,965	549	2,060	1,852
1966	4,879	4,879	4,221	2,094	2,119	591	2,335	2,066
1967	5,228	5,228	4,492	2,286	2,289	664	2,734	2,184
1968	5,760	5,760	4,952	2,463	2,468	753	3,112	2,369
1969	6,086	6,086	5,528	2,689	2,700	861	3,402	2,525
1970	6,979	6,979	6,380	3,010	3,028	962	3,683	2,757
1971	7,838	7,838	7,183	3,457	3,483	1,010	4,212	2,943
1972	8,688	8,688	7,939	4,035	4,050	1,414	4,800	3,299
1973	9,278	9,278	8,470	4,675	4,704	1,781	5,468	3,421
1974	11,976	11,976	10,917	5,481	5,514	2,207	6,690	3,926
1975	15,391	15,391	14,211	7,109	7,187	2,792	9,229	5,566
1976	19,713	19,713	16,938	8,536	8,498	3,470	11,523	6,607
1977	21,436	21,436	19,806	9,796	9,790	3,973	13,488	7,011
1978	23,455	23,455	21,494	10,895	10,925	4,301	15,270	7,807
1979	25,484	25,484	23,466	(d) 12,177	(d) 12,172	(e) 4,811	(e) 15,539	(e) 6,391
1980	29,627	29,627	27,548	(d) 14,008	(d) 13,954	(e) 5,416	(e) 17,535	(e) 6,888
1981	35,052	35,052	32,714	(d) 16,095	(d) 16,150	(e) 6,224	(e) 20,438	(e) 7,818
1982	40,593	40,593	37,991	(d) 19,742	(d) 19,799	(e) 7,332	(e) 23,536	(e) 8,518
1983	44,476	44,476	40,586	(d) 23,651	(d) 23,772	(e) 8,518	(e) 26,844	(e) 10,762
1984	50,920	50,920	44,220	(d) 26,595	(d) 26,600	(e) 9,418	(e) 30,092	(e) 11,640

(a) At 30 June. Expressed in Australian currency equivalents at ruling rates of exchange. (b) Includes General Government Public trading enterprises and prior to 1978-79 includes Public financial enterprises. (d) Includes Northern Territory. (e) From 1978-79 data is extracted from ABS 5501.0 Government Financial Estimates, Australia.

## BALANCE OF PAYMENTS

## CURRENT ACCOUNT

(\$ million)

Year	Goods			Invisibles			Balance on Current Account
	Exports FOB	Imports FOB	Balance of Trade	Credits	Debits	Net	
1959-60	1,860	-1,814	46	388	-902	-515	-468
1960-61	1,847	-2,056	-209	440	-978	-538	-747
1961-62	2,129	-1,701	427	476	-916	-440	-12
1962-63	2,122	-2,065	56	508	-1,034	-527	-471
1963-64	2,731	-2,237	493	618	-1,172	-555	-62
1964-65	2,574	-2,739	-165	696	-1,319	-623	-788
1965-66	2,626	-2,822	-196	730	-1,430	-700	-896
1966-67	2,926	-2,837	89	805	-1,556	-752	-663
1967-68	2,942	-3,159	-218	889	-1,817	-928	-1,146
1968-69	3,217	-3,203	14	963	-1,988	-1,026	-1,011
1969-70	3,969	-3,553	416	1,096	-2,232	-1,137	-720
1970-71	4,217	-3,790	427	1,169	-2,398	-1,229	-802
1971-72	4,722	-3,791	931	1,352	-2,622	-1,271	-340
1972-73	5,991	-3,808	2,183	1,565	-3,033	-1,468	715
1973-74	6,709	-5,754	956	1,875	-3,740	-1,865	-909
1974-75	8,442	-7,652	790	2,313	-4,323	-2,009	-1,219
1975-76	9,446	-7,922	1,524	2,248	-5,176	-2,928	-1,404
1976-77	11,446	-10,350	1,096	2,395	-5,923	-3,528	-2,432
1977-78	12,006	-11,150	856	2,751	-6,650	-3,899	-3,043
1978-79	14,072	-13,386	686	3,337	-7,705	-4,368	-3,682
1979-80	18,589	-15,831	2,758	4,272	-9,038	-4,766	-2,009
1980-81	18,718	-19,177	-459	4,738	-9,749	-5,010	-5,469
1981-82	19,083	-22,376	-3,293	5,036	-10,734	-5,698	-8,992
1982-83	20,656	-21,705	-1,049	5,895	-11,235	-5,340	-6,389
1983-84	23,682	-23,497	185	6,624	-14,188	-7,564	-7,379

## CAPITAL ACCOUNT (NET)

(\$ million)

Year	Non-monetary		Monetary Institutions		Balancing Item	Balance on Capital Account
	Government	Private	Non-official	Official		
1959-60	64	372	6	-38	64	468
1960-61	-24	456	2	81	232	747
1961-62	8	217	5	-177	-40	12
1962-63	53	469	6	-150	92	471
1963-64	-47	465	1	-447	89	62
1964-65	-34	511	13	297	2	788
1965-66	7	704	5	-57	237	896
1966-67	-13	394	6	124	152	663
1967-68	198	964	42	-79	20	1,146
1968-69	24	983	-6	-151	160	1,011
1969-70	-162	840	4	-40	79	720
1970-71	-70	1,467	-20	-602	26	802
1971-72	-83	1,310	60	-1,479	531	340
1972-73	-60	422	-17	-1,076	17	-715
1973-74	53	176	145	425	110	909
1974-75	-19	848	-3	458	-58	1,219
1975-76	-44	728	-91	1,019	-207	1,404
1976-77	243	1,509	32	491	155	2,432
1977-78	1,504	841	-23	540	181	3,043
1978-79	1,365	1,739	32	124	423	3,682
1979-80	-34	1,701	165	301	-123	2,009
1980-81	-48	5,535	-65	-1,149	1,196	5,469
1981-82	462	8,708	106	-1,354	1,071	8,992
1982-83	813	7,201	661	-2,436	150	6,389
1983-84	622	6,735	201	-1,850	1,671	7,379

## FOREIGN TRADE

## TOTALS

## PRINCIPAL EXPORTS

Year ended 30 June—	TOTALS		PRINCIPAL EXPORTS					
	Imports	Exports	Coal(a)	Wool(b)	Barley	Wheat	Petroleum products	Flour(c)
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1902(g)	76	100	n.a.	30	n.a.	6	n.a.	n.a.
1912(g)	122	158	2	52	—	13	—	3
1922	188	256	2	96	1	57	—	11
1932	104	216	1	74	3	38	—	8
1942	348	338	1	112	—	9	—	66
1952	2,107	1,350	1	636	22	111	—	30
1960	1,854	1,875	9	742	23	123	21	38
1961	2,175	1,938	15	649	29	205	24	35
1962	1,769	2,155	27	720	30	285	25	31
1963	2,163	2,152	22	733	10	217	29	42
1964	2,373	2,782	32	926	18	362	20	37
1965	2,905	2,651	51	781	18	297	11	25
1966	2,939	2,721	63	757	12	264	9	23
1967	3,045	3,024	72	840	22	361	30	24
1968	3,264	3,045	85	739	7	343	33	22
1969	3,469	3,374	117	827	18	258	26	21
1970	3,881	4,137	164	803	23	338	27	20
1971	4,150	4,376	195	593	51	433	38	13
1972	4,008	4,893	238	633	73	419	45	12
1973	4,121	6,214	291	1,262	39	273	41	20
1974	6,085	6,914	348	1,248	68	517	95	49
1975	8,080	8,726	721	815	187	1,028	145	39
1976	8,241	9,640	1,063	1,032	201	922	144	26
1977	10,411	11,652	1,282	1,587	223	863	190	21
1978	11,169	12,270	1,482	1,289	122	1,011	223	14
1979	13,752	14,241	1,524	1,592	148	794	295	12
1980	16,218	18,871	1,675	1,738	354	2,177	427	15
1981	18,965	19,177	1,967	1,845	243	1,729	517	14
1982	23,005	19,575	2,289	1,913	241	1,720	551	14
1983	21,806	22,123	3,073	1,807	131	1,440	1,153	8
1984	24,061	24,781	3,328	1,965	499	1,814	1,226	12
1985 <sub>p</sub>	30,026	30,640	4,604	2,423	778	2,786	1,158	12

## PRINCIPAL EXPORTS—continued

Year ended 30 June—	PRINCIPAL EXPORTS							Iron	Other
	Butter(d)	Hides and skins	Meats	Fruit(e)	Sugar	Lead and lead alloys unworked (f)	Ores and concentrates		
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	
1902(g)	3	3	5	—	—	—	—	—	
1912(g)	9	6	9	1	—	3	—	8	
1922	16	6	11	6	—	4	—	1	
1932	21	5	13	10	5	5	—	—	
1942	16	12	28	11	5	14	—	2	
1952	10	34	71	44	14	52	—	40	
1960	58	64	177	64	53	33	—	44	
1961	41	54	145	61	70	33	—	54	
1962	49	64	179	74	68	38	—	48	
1963	49	74	226	73	91	35	—	44	
1964	57	92	244	92	157	50	—	54	
1965	67	80	286	86	113	61	1	77	
1966	58	89	228	107	94	67	3	88	
1967	65	86	286	95	100	54	46	100	
1968	47	62	285	105	98	63	103	123	
1969	41	75	291	92	122	66	180	143	
1970	53	88	426	88	116	106	278	205	
1971	48	71	438	100	150	30	374	231	
1972	49	80	569	89	211	68	376	226	
1973	62	189	867	117	250	83	439	239	
1974	42	148	801	105	223	121	499	309	
1975	34	102	450	91	645	130	707	423	
1976	64	142	679	96	570	111	771	528	
1977	38	239	896	99	637	166	902	674	
1978	44	244	1,128	115	537	194	921	701	
1979	49	351	1,722	141	448	260	968	727	
1980	39	355	1,738	188	667	548	1,076	1,092	
1981	30	191	1,594	209	1,146	321	1,117	1,965	
1982	19	109	1,292	175	764	264	1,252	2,131	
1983	41	133	1,585	201	557	302	1,487	2,206	
1984	58	161	1,309	177	621	310	1,619	2,080	
1985 <sub>p</sub>	74	169	1,288	202	574	251	1,869	2,312	

(a) Anthracite, bituminous and sub-bituminous (except briquettes). (b) Includes greasy wool, stipe, wool scoured and carbonised, wool exported on skins. (c) Flour, plain white. (d) Includes concentrates and ghee. (e) Includes juices and fruit preparations. (f) Includes silverlead. (g) Year ended previous December.

## FOREIGN TRADE—continued

## PRINCIPAL IMPORTS

Year ended 30 June—	Vegetable foodstuffs, etc.	Apparel, etc.	Oil, etc.	Metals, etc.	Rubber	Paper, etc.
	\$m	\$m	\$m	\$m	\$m	\$m
1902(a)	7.2	21.8	2.4	15.6	1.0	3.2
1912(a)	7.4	32.4	3.2	28.0	2.8	5.2
1922	8.0	62.0	9.4	45.6	3.4	8.8
1932	5.2	30.8	11.0	14.8	1.6	8.8
1942	12.3	65.3	32.4	143.6	6.0	8.7
1952	50.1	407.1	174.9	768.8	68.0	137.5
1960	54.9	222.1	213.5	710.1	48.5	103.8
1961	60.5	264.9	223.3	871.3	47.3	133.8
1962	56.3	208.4	219.8	630.3	35.5	109.6
1963	55.5	233.3	246.3	850.0	46.7	133.5
1964	61.6	234.0	251.5	947.1	51.2	141.7
1965	66.2	272.1	260.1	1,275.2	66.3	156.5

Year ended 30 June—	Food and live animals	Beverages and tobacco	Crude materials, inedible, except fuels	Minerals fuels, lubricants and related materials	Animal and vegetable oils and fats	Chemicals	Manufactured goods classified chiefly by materials	Machinery and transport equipment	Commodities and transactions of merchandise trade not elsewhere classified	
									Miscellaneous manufactured articles	
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1966	110	37	197	252	15	266	590	1,121	220	90
1967	118	38	206	247	15	297	586	1,144	243	110
1968	117	36	224	241	14	309	644	1,250	270	111
1969	128	44	228	252	13	328	688	1,328	298	116
1970	140	48	247	255	16	363	753	1,528	350	124
1971	158	50	235	190	18	410	867	1,644	403	125
1972	160	51	219	194	15	410	856	1,483	432	137
1973	163	52	268	175	13	424	893	1,489	475	119
1974	237	65	415	377	28	580	1,404	2,091	721	108
1975	302	75	390	724	43	786	1,496	3,059	961	125
1976	275	90	387	807	42	709	1,460	3,177	1,045	160
1977	455	99	471	996	54	926	1,891	3,980	1,354	105
1978	531	122	477	1,157	66	1,009	1,993	4,118	1,484	124
1979(b)	533	131	562	1,140	66	1,201	2,408	5,731	1,742	125
1980	655	142	700	2,098	81	1,579	2,900	5,656	2,005	226
1981	655	169	764	2,726	63	1,583	3,263	7,032	2,264	271
1982	732	173	769	3,002	80	1,828	3,856	9,357	2,681	291
1983	836	184	648	3,098	82	1,776	3,446	8,022	2,734	390
1984	1,015	196	762	2,218	111	2,157	3,984	9,309	3,119	668
1985p	1,246	225	932	2,300	112	2,554	4,920	11,900	3,866	1,000

(a) Year ended previous December. (b) From 1 July 1978, imports have been classified according to the new A.I.C.C. which is based on the Standard International Trade Classification, Revision 2. The figures for 1979 on, are therefore not comparable to those for previous years.

## NATIONAL ACCOUNTS

## GROSS DOMESTIC PRODUCT (a)

Year—	At current prices		At constant prices			
	(c)		1959-60 prices (b)	1966-67 prices (b)	1974-75 prices (b)	1979-80 prices (c)
	\$m	\$m	\$m	\$m	\$m	\$m
1961-62 . . . . .	14,924	14,924	14,292	17,120	..	..
1962-63 . . . . .	16,137	16,137	15,225	18,285	..	..
1963-64 . . . . .	17,934	17,934	16,384	19,598	..	..
1964-65 . . . . .	19,738	19,738	17,629	20,990	..	..
1965-66 . . . . .	20,742	20,742	17,888	21,433	..	..
1966-67 . . . . .	22,844	22,844	19,090	22,844	42,463	..
1967-68 . . . . .	24,387	24,387	..	23,754	43,990	..
1968-69 . . . . .	27,546	27,546	..	25,872	48,121	..
1969-70 . . . . .	30,551	30,551	..	27,492	50,899	77,678
1970-71 . . . . .	33,758	33,758	..	28,748	53,469	82,475
1971-72 . . . . .	37,758	37,758	..	30,088	56,064	86,401
1972-73 . . . . .	43,024	43,024	..	31,472	58,077	91,128
1973-74 . . . . .	51,566	51,566	..	32,983	60,983	94,983
1974-75 . . . . .	62,061	62,061	..	33,518	62,096	96,017
1975-76 . . . . .	73,191	73,191	..	..	63,635	97,993
1976-77 . . . . .	83,656	83,656	..	..	65,653	100,876
1977-78 . . . . .	90,894	90,894	..	..	65,933	101,951
1978-79 . . . . .	103,083	103,083	..	..	69,097	106,115
1979-80 . . . . .	116,417	116,417	..	..	70,885	108,969
1980-81 . . . . .	132,705	132,705	..	..	..	113,609
1981-82 . . . . .	150,253	150,253	..	..	..	115,847
1982-83 . . . . .	165,306	165,306	..	..	..	116,409
1983-84 . . . . .	186,550	186,550	..	..	..	120,312
1984-85 . . . . .	207,089	207,089	..	..	..	126,376

(a) For a description of the conceptual basis of these estimates, see *Australian National Accounts: Concepts, Sources and Methods* (5216.0). (b) *Australian National Accounts: National Income and Expenditure, 1983-84*, (5204.0). (c) These figures are consistent with those published in *Quarterly Estimates of National Income and Expenditure, Australia, June Quarter 1985* (5206.0).

## GROSS FIXED CAPITAL EXPENDITURE (a)

Year—	At current prices		At constant prices			
	(c)		1959-60 prices (b)	1966-67 prices (b)	1974-75 prices (b)	1979-80 prices (c)
	\$m	\$m	\$m	\$m	\$m	\$m
1961-62 . . . . .	3,723	3,723	3,569	4,188	..	..
1962-63 . . . . .	4,046	4,046	3,855	4,513	..	..
1963-64 . . . . .	4,555	4,555	4,259	4,985	..	..
1964-65 . . . . .	5,316	5,316	4,825	5,637	..	..
1965-66 . . . . .	5,776	5,776	5,101	5,971	..	..
1966-67 . . . . .	6,074	6,074	5,187	6,074	11,370	..
1967-68 . . . . .	6,585	6,585	..	6,392	12,019	..
1968-69 . . . . .	7,401	7,401	..	6,907	12,981	..
1969-70 . . . . .	8,063	8,063	..	7,207	13,663	23,360
1970-71 . . . . .	9,002	9,002	..	7,571	14,473	24,620
1971-72 . . . . .	9,883	9,883	..	7,778	14,817	25,253
1972-73 . . . . .	10,719	10,719	..	7,845	14,973	25,448
1973-74 . . . . .	12,489	12,489	..	8,108	15,324	26,153
1974-75 . . . . .	14,823	14,823	..	7,928	14,823	25,030
1975-76 . . . . .	17,934	17,934	..	..	15,465	26,095
1976-77 . . . . .	19,913	19,913	..	..	15,353	25,961
1977-78 . . . . .	21,612	21,612	..	..	15,202	25,762
1978-79 . . . . .	24,496	24,496	..	..	16,002	27,073
1979-80 . . . . .	26,857	26,857	..	..	15,768	26,857
1980-81 . . . . .	33,089	33,089	..	..	..	29,643
1981-82 . . . . .	38,765	38,765	..	..	..	31,438
1982-83 . . . . .	38,863	38,863	..	..	..	28,318
1983-84 . . . . .	40,641	40,641	..	..	..	27,876
1984-85 . . . . .	46,373	46,373	..	..	..	30,018

For footnotes see the above table.



## INTERNATIONAL STATISTICS

This section presents a range of statistics for selected countries in the areas of Population, Labour Force, Prices and Wages, Finance and Energy.

### Quality and Comparability of data

The quality and comparability of data presented here are affected by a number of factors. Considerations such as methods of estimating, methods of data collection, coverage, definitions and margins of error may vary between countries. Therefore, care should be exercised when comparing the data in its present form.

### Level of detail

These statistics are presented at a broad level for purposes of comparison only. Considerably more detail is presented in the source publications which are cited at the end of each table. For further reference a select bibliography of related publications can be found at the end of this section.

**ESTIMATED MID-YEAR POPULATION FOR SELECTED COUNTRIES, 1975 TO 1984**  
(Million)

Year	Australia	U.S.A.	Japan	Federal Republic of Germany	U.K.	France	Italy	Canada	Sweden	New Zealand
1975 . . . . .	13.89	215.97	111.52	61.83	55.98	52.71	55.44	22.73	8.19	3.09
1976 . . . . .	14.03	218.04	112.77	61.53	55.96	52.89	56.70	23.03	8.22	3.12
1977 . . . . .	14.19	220.24	113.88	61.40	55.92	53.08	56.73	23.30	8.25	3.13
1978 . . . . .	14.36	222.59	114.92	61.33	55.90	53.38	56.13	23.54	8.28	3.13
1979 . . . . .	14.51	225.06	115.88	61.36	55.95	53.61	56.29	23.77	8.29	3.14
1980 . . . . .	14.70	227.74	116.80	61.57	56.01	53.80	56.42	24.07	8.31	3.14
1981 . . . . .	14.92	230.02	117.66	61.68	56.35	54.18	56.50	24.37	8.32	3.16
1982 . . . . .	15.18	232.31	118.44	61.64	56.34	54.48	56.64	24.66	8.33	3.18
1983 . . . . .	15.40	234.50	119.26	61.42	56.38	54.73	56.83	24.90	8.33	3.23
1984 . . . . .	15.54	236.63	120.02	61.18	n.a	54.95	56.98	25.15	8.34	3.25

*Source: OECD Labour Force Statistics, 1962-1982, OECD 1984; OECD Quarterly Labour Force Statistics, 1/1985.*

### POPULATION OF SELECTED CAPITAL CITIES

City proper	Population	City proper	Population
Bangkok . . . . .	(1980) 3,077,361	Moscow . . . . .	(1982) 8,302,000
Beijing (Peking) . . . . .	(1970) 7,570,000	New Delhi . . . . .	(1981) 271,990
Bonn . . . . .	(1981) 291,464	New York . . . . .	(1980) 7,071,639
Buenos Aires . . . . .	(1980) 2,908,001	Oslo . . . . .	(1981) 451,204
Cairo . . . . .	(1976) 5,074,016	Ottawa . . . . .	(1980) 304,460
Canberra . . . . .	(1984) 264,300	Paris . . . . .	(1975) 2,317,227
Jakarta . . . . .	(1980) 6,503,449	Rome . . . . .	(1980) 2,914,042
Katmandu . . . . .	(1971) 150,402	Seoul . . . . .	(1980) 8,364,379
Lagos . . . . .	(1975) 1,060,848	Stockholm . . . . .	(1981) 647,214
London . . . . .	(1981) 6,696,008	Tokyo . . . . .	(1981) 8,334,860
Manila . . . . .	(1980) 1,630,485	Washington . . . . .	(1980) 638,333
Mexico City . . . . .	(1979) 9,191,295	Wellington . . . . .	(1981) 135,688

*Source: Demographic Year Book 1982, United Nations N.Y., 1984.*

**CIVILIAN EMPLOYMENT SELECTED COUNTRIES, 1975 TO 1984**  
(<sup>'000</sup>)

Year (a)	Australia	U.S.A.	Federal Republic of				U.K.	France	Italy	Canada	Sweden	New Zealand
			Japan	Germany								
1975 . . . . .	5,841	85,846	52,230	25,285	24,704	20,714	19,594	9,284	4,062	1,214		
1976 . . . . .	5,898	88,752	52,710	25,059	24,492	20,856	19,742	9,477	4,088	1,235		
1977 . . . . .	5,995	92,017	53,420	25,014	24,523	21,036	19,948	9,651	4,099	1,254		
1978 . . . . .	5,970	96,048	54,080	25,169	24,681	21,113	20,044	9,987	4,115	1,246		
1979 . . . . .	6,042	98,824	54,790	25,507	25,009	21,118	20,266	10,395	4,180	1,262		
1980 . . . . .	6,247	99,303	55,360	25,771	24,881	21,127	20,551	10,708	4,232	1,264		
1981 . . . . .	6,356	100,397	55,810	25,569	23,836	20,959	20,623	11,006	4,224	1,258		
1982 . . . . .	6,403	99,526	56,380	25,100	23,663	20,984	20,297	10,644	4,219	1,274		
1983 . . . . .	6,289	100,834	57,330	24,690	23,470	20,839	20,350	10,734	4,224	1,258		
1984 . . . . .	6,471	105,005	57,660	24,649	23,705	n.a.	20,689	11,000	4,255	1,271		

(a) Annual averages

Source: OECD Labour Force Statistics, 1962-1982; OECD Quarterly Labour Force Statistics, 1/1985.

**CIVILIAN EMPLOYMENT/POPULATION RATIOS, SELECTED COUNTRIES, 1975 TO 1984**  
(Per cent)

Year (a)	Australia	U.S.A.	Federal Republic of				U.K.	France	Italy	Canada	Sweden	New Zealand
			Japan	Germany								
1975 . . . . .	58.6	53.1	61.9	52.1	57.6	51.6	46.0	55.6	62.5	56.2		
1976 . . . . .	58.1	53.9	61.7	51.5	56.8	51.2	46.0	55.4	62.3	56.2		
1977 . . . . .	58.0	54.9	61.9	51.1	56.6	51.6	46.2	55.2	62.5	56.5		
1978 . . . . .	56.7	56.3	62.0	51.0	56.6	51.4	45.9	56.0	62.4	55.6		
1979 . . . . .	56.0	56.9	62.1	51.2	57.0	51.0	45.9	57.2	63.0	55.9		
1980 . . . . .	56.9	56.3	62.0	51.2	56.3	50.6	46.0	58.9	63.3	55.2		
1981 . . . . .	56.8	56.2	62.0	50.3	53.3	49.8	45.8	58.4	62.9	54.1		
1982 . . . . .	56.0	55.0	61.9	49.0	52.6	49.5	44.5	55.5	62.5	54.2		
1983 . . . . .	53.9	55.1	62.4	48.4	52.1	48.6	44.3	55.2	62.2	52.8		
1984 . . . . .	54.8	56.7	62.2	48.5	n.a.	n.a.	44.8	55.9	62.3	52.9		

(a) Annual averages

Source: OECD Labour Force Statistics, 1962-1982; OECD Quarterly Labour Force Statistics, 1/1985.

**CIVILIAN LABOUR FORCE: PARTICIPATION RATES, SELECTED COUNTRIES, 1975 TO 1984**  
(Per cent)

Year (a)	Australia	U.S.A.	Federal Republic of				U.K.	France	Italy	Canada	Sweden	New Zealand
			Japan	Germany								
1975 . . . . .	61.4	58.0	63.1	54.3	59.5	53.9	48.9	59.7	63.6	56.4		
1976 . . . . .	61.0	58.4	63.0	53.7	59.7	54.0	49.4	59.7	63.7	56.4		
1977 . . . . .	61.5	59.1	63.2	53.2	59.7	54.3	49.8	60.1	63.6	56.6		
1978 . . . . .	60.5	59.9	63.4	53.0	59.7	54.3	49.5	61.1	63.8	56.5		
1979 . . . . .	59.4	60.5	63.4	53.0	59.8	54.3	49.7	61.8	64.3	57.0		
1980 . . . . .	60.4	60.6	63.3	52.9	59.7	54.1	49.8	62.5	64.6	56.5		
1981 . . . . .	60.1	60.8	63.9	52.8	59.0	53.9	50.1	63.1	64.5	56.7		
1982 . . . . .	60.3	60.9	63.4	52.6	58.8	54.2	49.0	62.4	64.5	56.2		
1983 . . . . .	59.9	60.9	64.0	52.8	58.8	53.2	49.2	62.7	64.4	55.9		
1984 . . . . .	60.2	61.3	63.9	53.0	n.a.	n.a.	50.0	63.0	64.3	56.1		

(a) Annual averages

Source: OECD Labour Force Statistics, 1962-1982; OECD Quarterly Labour Force Statistics, 1/1985.

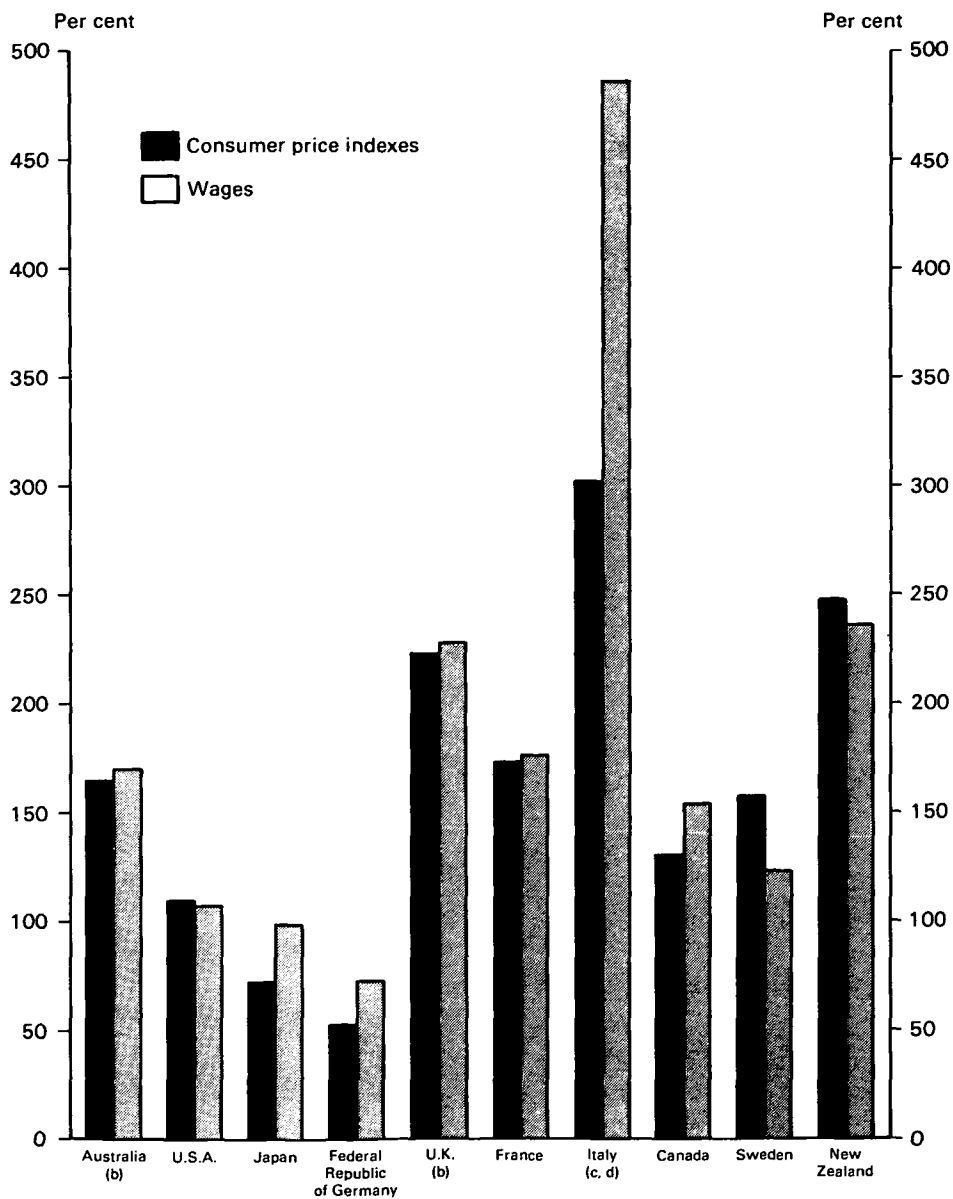
**DISTRIBUTION OF CIVILIAN EMPLOYMENT BY ECONOMIC SECTOR, SELECTED COUNTRIES  
1975 TO 1984  
(Per cent)**

Year	Federal Republic of Germany									
	Australia	U.S.A.	Japan	Germany	U.K.	France	Italy	Canada	Sweden	New Zealand
<b>AGRICULTURE(a)</b>										
1975	6.8	4.1	12.7	7.0	2.7	10.2	16.7	6.1	6.4	10.7
1976	6.5	3.9	12.2	6.7	2.8	9.8	16.4	5.9	6.2	10.5
1977	6.7	3.7	11.9	6.4	2.7	9.4	15.8	5.7	6.1	10.7
1978	6.3	3.7	11.7	6.1	2.7	9.1	15.4	5.7	6.1	11.2
1979	6.6	3.6	10.2	5.8	2.6	8.9	14.9	5.7	5.8	11.1
1980	6.5	3.6	10.4	5.6	2.6	8.7	14.2	5.4	5.6	10.9
1981	6.5	3.5	10.0	5.5	2.6	8.6	13.4	5.4	5.6	11.2
1982	6.4	3.6	9.7	5.5	2.7	8.3	12.4	5.2	5.6	11.5
1983	6.6	3.5	9.3	5.6	2.7	8.1	12.4	5.5	5.4	11.3
1984	6.2	3.3	8.9	5.6	2.6	n.a.	11.7	5.3	5.1	11.3
<b>INDUSTRY(b)</b>										
1975	33.5	30.6	35.9	45.4	40.6	38.7	39.1	29.3	36.5	35.8
1976	33.2	30.8	35.8	44.9	39.7	38.1	38.3	29.7	35.4	35.8
1977	32.4	30.9	35.4	44.7	39.6	37.6	38.4	28.8	34.3	35.9
1978	31.2	31.1	35.0	44.4	36.2	36.9	38.1	28.7	33.0	34.2
1979	31.2	31.3	34.9	44.4	38.7	36.3	37.7	28.9	32.5	33.6
1980	30.9	30.5	35.3	44.2	37.6	36.0	37.8	28.5	32.2	33.8
1981	30.3	30.1	35.3	43.5	35.5	35.3	37.5	28.3	31.3	32.3
1982	29.8	28.4	34.9	42.7	34.7	34.6	37.1	26.5	30.3	32.9
1983	28.5	28.0	34.8	42.0	33.6	33.8	36.1	25.5	29.9	32.5
1984	28.1	28.5	34.8	41.6	33.1	n.a.	34.0	25.9	29.8	32.3
<b>SERVICES(c)</b>										
1975	59.7	65.3	51.5	47.6	56.7	51.1	44.2	64.6	57.1	53.5
1976	60.3	65.3	52.0	48.4	57.5	52.1	45.2	64.4	58.3	53.7
1977	60.9	65.4	52.8	49.0	57.7	53.0	45.8	65.4	59.6	53.5
1978	62.4	65.2	53.3	49.5	58.1	54.0	46.5	65.5	60.9	54.6
1979	62.2	65.2	53.9	49.8	58.7	54.7	47.4	65.4	61.7	55.4
1980	62.6	65.9	54.2	50.3	59.9	55.3	47.9	66.0	62.2	55.3
1981	63.2	66.4	54.7	51.0	61.8	56.2	49.2	66.3	63.1	56.5
1982	63.8	68.0	55.4	51.8	62.6	57.2	50.5	68.2	64.1	55.7
1983	64.9	68.5	56.0	52.5	63.8	58.1	51.5	69.0	64.7	56.2
1984	65.7	68.2	56.3	52.8	64.3	n.a.	54.2	68.8	65.1	56.4

(a) Agriculture, forestry, hunting and fishing. (b) Mining and quarrying; manufacturing; electricity, gas and water; construction. (c) Transportation, communication, public utilities, trade, finance, public administration, private household services and miscellaneous services.

Source: OECD Labour Force Statistics, 1962-1982; OECD Quarterly Labour Force Statistics, 1/1985.

**PERCENTAGE CHANGE IN CONSUMER PRICE INDEXES AND WAGES(a), SELECTED COUNTRIES, 1974 TO 1984**



(a) Wages in Manufacturing unless otherwise stated. (b) Male wages. (c) Percentage changes are for 1974 to 1983. (d) Wages in non-agricultural activities.

Source: ILO Yearbook of Labour Statistics, 1984; ILO Bulletin of Labour Statistics, 1/1985.

**PLATE 48**

**EXCHANGE RATES AGAINST SELECTED CURRENCIES AND  
TRADE WEIGHTED INDEX OF VALUE OF AUSTRALIAN DOLLAR**

	As at 30 June—					
	1979	1980	1981	1982	1983	1984
Units of foreign currency per \$A(a)						
United States dollar . . . . .	1.1211	1.1576	1.1480	1.0223	0.8745	0.8613
United Kingdom pound . . . . .	0.5158	0.4917	0.5895	0.5870	0.5730	0.6378
Germany Fed. Rep. Mark . . . . .	2.068	2.033	2.747	2.506	2.227	2.399
Japanese yen . . . . .	242.83	251.31	259.51	260.18	209.38	204.60
Trade weighted index of value of Australian dollar (May 1970 = 100)(b)	83.1	85.0	92.9	88.2	77.7	79.2

(a) The rates quoted are the market rate indications for 30 June published by the Reserve Bank of Australia. (b) The trade weighted index is published by the Reserve Bank and is an index of the average value of the Australian dollar vis a vis currencies of Australia's trading partners.

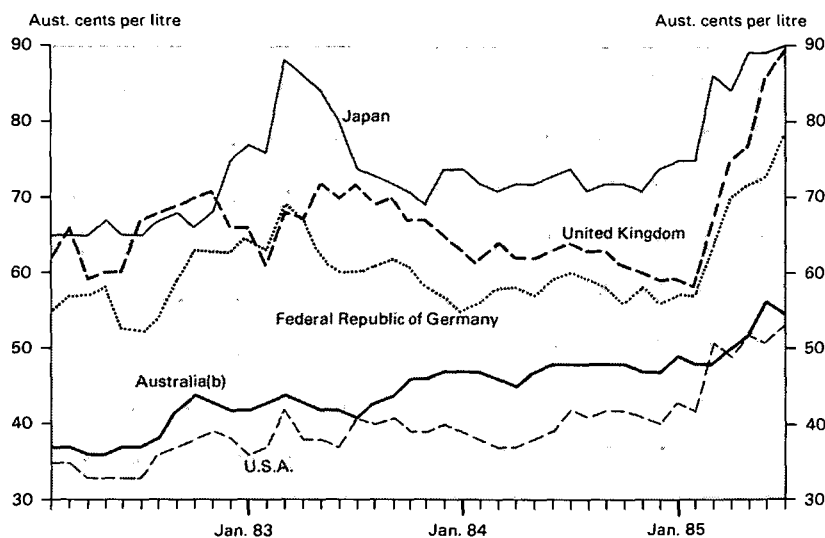
Source: Australian Bureau of Statistics, *Balance of Payments, Australia (5301.0)*

**ENERGY CONSUMPTION: TOTAL PRIMARY ENERGY REQUIREMENTS  
FOR SELECTED COUNTRIES  
(Tonnes of oil equivalent, per capita)**

Country	Tonnes	Country	Tonnes
Australia . . . . .	4.71	Japan . . . . .	2.93
Austria . . . . .	3.41	Luxembourg . . . . .	8.03
Belgium . . . . .	4.01	Netherlands . . . . .	4.02
Canada . . . . .	8.49	New Zealand . . . . .	3.75
Denmark . . . . .	3.25	Norway . . . . .	6.11
Finland . . . . .	5.05	Portugal . . . . .	1.24
France . . . . .	3.43	Spain . . . . .	1.89
Germany . . . . .	4.13	Sweden . . . . .	5.84
Greece . . . . .	1.66	Switzerland . . . . .	3.94
Iceland . . . . .	5.95	Turkey . . . . .	0.79
Ireland . . . . .	2.42	United Kingdom . . . . .	3.44
Italy . . . . .	2.32	United States . . . . .	7.37

Source: *The OECD Observer, No. 133, March 1985*

**RETAIL PRICES OF AUTOMOTIVE GASOLINE EXPRESSED IN AUSTRALIAN CURRENCY(a), FOR SELECTED COUNTRIES**



(a) Australian prices quoted are for June 1985. International retail prices are based on latest information received from Australian overseas posts. Prices for most countries have been converted using 1 July 1985 exchange rates. Automotive gasoline prices are for the most commonly used grade of automotive gasoline in that country, at 'full-service' prices.

(b) DRE estimate based on latest available CPI price data for eight capital cities, Prices Surveillance Authority determinations, allowance for discounts, and advice from the Australian Automobile Chamber of Commerce.

Source: *Major Energy Statistics, No. 54, July 1985*; Department of Resources and Energy.

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