YEAR BOOK
AUSTRALIA
1991

IAN CASTLES
Australian Statistician

NUMBER 74

AUSTRALIAN BUREAU OF STATISTICS
CANBERRA

ABS Catalogue No. 1301.0 (case bound)

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No other amendments were made to this Product

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PREFACE

Year Book Australia 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 various aspects of the economy and social conditions in Australia. In addition, it contains descriptive matter dealing with Australia's history, government, international relations, defence, climate, physiography, culture and environment.

The first *Official Year Book of the Commonwealth* was published early in 1908, although individual Australian States and colonies had been producing year books for several decades before that. *Year Book Australia 1991* is issued under the authority of the Commonwealth Government and follows a similar pattern to past issues. However, chapters have been revised and new material added.

Each year a number of *Special Articles* appear in the Year Book. This year the *Special Articles* are listed in the Table of Contents.

Most of the statistics contained in this volume relate to the years ended June or December 1989 or 1990. 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, while the ABS *Catalogue of Publications and Products* (1101.0) lists all current publications of the ABS.

I extend my thanks and appreciation to all those officers involved in the preparation of *Year Book Australia 1991* and those organisations who have kindly supplied material for inclusion in this publication.

Australian Bureau of Statistics
Canberra
March 1991

IAN CASTLES
Australian Statistician

ACKNOWLEDGMENTS

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 chapters or advised on their preparation.

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ACT Department of Education
ACT Electricity and Water, Water Branch
ACT Institute of TAFE
ACT Treasury
AGL Canberra Limited
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  Bill van Aken
  Centre for Environmental Mechanics
  Division of Forestry and Forest Products
  Division of Water Resources
  Institute of Minerals, Energy and Conservation
Conservation Commission (Northern Territory)
Defence Service Homes Corporation
Department of the Arts, Sport, the Environment, Tourism and Territories
  Diane Lucas
  Geoff Biddle
  Ignatius Duivenvoorden
  Jeremy Russell-Smith
  Noel Ryan
  P. Ingamells
Department of the Chief Minister (Northern Territory)
Department of Community Services (Tasmania)
Department of Community Services and Health

Department of Defence
Department of Environment and Conservation
Department of the Environment, Land and Planning (Australian Capital Territory)
Department of Employment, Education and Training
International Literacy Year Secretariat
Department of Foreign Affairs and Trade
Department of Housing (New South Wales)
Department of Housing and Local Government (Queensland)
Department of Immigration, Local Government and Ethic Affairs
Department of Industrial Relations
Department of Industries and Development (Northern Territory)
Department of Industry and Fisheries (Northern Territory)
Department of Industry, Technology and Commerce
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Department of Transport and Works (Northern Territory)
Department of Treasury (Northern Territory)
Department of Veteran's Affairs
Department of Water Resources (Victoria)
Department of Urban Services (Australian Capital Territory)
Dumaresq-Barwon Border Rivers Commission, Brisbane
Engineering and Water Supply Department (South Australia)
Strategic Services
Federal Airports Corporation
Film Australia
Forestry Commission of Tasmania
Great Barrier Reef Marine Park Authority
Housing and Community Services Bureau (Australian Capital Territory)
Housing Loans Insurance Corporation (The Treasury)
Independent Airfares Commission
Industry Commission
Insurance and Superannuation Commission
International Cultural Corporation of Australia
Joint Coal Board
Law Reform Commission
Ministry of Education, Health and the Arts (Australian Capital Territory)
Ministry of Housing and Construction (Victoria)
Murray-Darling Basin Commission
Musica Viva
National Arts Industry Training Council Ltd
National Crime Authority
National Film and Sound Archive
National Heart Foundation of Australia
National Library of Australia
National Museum of Australia
National Standards Commission
National Trust of Australia (Tasmania)
K.O. Murray
Peter Jarver
Northern Territory Housing Commission
Northern Territory Power and Water Authority
Northern Territory Tourist Commission
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Office of Water Resources (Victoria)
Overseas Telecommunications Commission Australia
Parliament of Australia, Department of the Parliamentary Library
Police Commissioner's Australian Crime Statistics
Sub-Committee—Selected Crime Statistics, Australia
Queensland Water Resources Commission
Radio Australia
Reserve Bank of Australia
Rivers and Water Supply Commission (Tasmania)
South Australian Housing Trust
Social Broadcasting Service
State and Federal Police Commissioner's Annual Reports
State Housing Commission of Western Australia (HomesWest)
Tasmanian Development Authority
Telecom Australia
Water Authority of Western Australia
Surface Water Branch
Worksafe Australia

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: NSW (New South Wales), Vic. (Victoria), Qld (Queensland), WA (Western Australia), SA (South Australia), Tas. (Tasmania), NT (Northern Territory), ACT (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. 1989 refer to the year ended 31 December 1989; those shown as e.g. 1988–89 refer to the year ended 30 June 1989. Other yearly periods are specifically indicated. The range of years shown in table headings, e.g. 1901 to 1988–89 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 and other products can be obtained from Central Information Services Section, Australian Bureau of Statistics, PO Box 10, Belconnen, ACT 2616, Australia, phone (06) 252 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 and Products (1101.0)* which is available from any ABS office.

In many cases, the ABS can also provide information which is not published or which is historical or compiled from a variety of published and unpublished sources. Information of this kind may be obtained through the Information Consultancy Service. This information may be made available in one or more of the following forms: consultancy reports, microfiche, floppy disk, magnetic tape, computer printout or photocopy. Charges are generally made for such information. Inquiries may be made by contacting Information Services in the nearest ABS office.

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 involved 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 stoneware tools; scrapers were used to fashion further tools out of wood. This continued 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 12,000 years ago by the post-glacial rising seas, Aboriginals still maintained the culture of the late Pleistocene period, until subject to the influence of European settlement of the island.

Estimates by anthropologists of the Aboriginal population at the time of European settlement have varied greatly. In 1930, anthropologist Radcliffe-Brown postulated a minimum figure of 300,000, which was officially accepted by the Government. Recent archaeological finds suggest that a population of 750,000 could have been sustained. 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 at these ceremonial gatherings led to the wide dispersal of goods. Religious and ceremonial activities relating to the land were a vital part of Aboriginal life. 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 caused, in part, 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.

Speculation on the Great South Land

The Ancient Greeks, who are said to have believed the world was round, postulated the existence of a Great South Land. The Christian peoples of Middle Ages Europe, for religious reasons however, no longer believed in a global world and saw the earth as flat and bounded by the fiery edges of the equator.

First references to Australia came from the Greeks, the Arabs, the Chinese, the Malays and Indians but are thought to have been largely a product of imagination. To the Malays, for example, the Great South Land though not uninhabited was the Land of the Dead. To the Hindu-Buddhists, who came from the first century AD to colonise Sumatra and Java, there were 'islands of gold' to the south of Java and to the south-east of Timor but, like the Middle Ages Christians before them, the beliefs shaped dangers too perilous to confront.

The Chinese recognised the fantasy of these and similar reports which they would certainly have heard of while trading in the area. Their maps show they knew of the Malay Peninsula, Sumatra, Java, Bali, Lombok, Timor, the Moluccas, Celebes and Borneo. However, the distances involved were too great and the evidence too small and fanciful, and their primary aim was to maintain the freedom of their existing trade routes rather than embark on new explorations. By the time they might have felt any incentive to explore further, domestic political changes curtailed their outward growth.

It is unclear whether any of these peoples, constrained as they certainly were by religious, superstitious and domestic political factors, paid visits to Australia. If they did, their knowledge made no impact on the world at large or on the history of Australia. Contacts of that nature are part of our documented history and probably begin with the occurrence of 'Java the Great' in a number of French maps dating from the middle decades of the sixteenth century. Although the significance of 'Java the Great' is hotly debated, so long as the Portuguese are thought to have been possible discoverers of large portions of our continent, one cannot easily dismiss suggestions that the French were here in the sixteenth century also.

The Portuguese and the Spanish

Theories that place the Portuguese here sometime in the sixteenth century have some support from inconclusive charts and documents but the assumptions rest largely on three points: the extensive exploration undertaken by this highly civilised seafaring race elsewhere about the globe; the Portuguese obsession with the quest for wealth, knowledge and conversion; and the certainty that the Portuguese debated the issue of a 'terra australis incognita' (unknown southern land). Yet hard, clinching evidence of contact is lacking.

Viceroys of Spain's American empire regularly sought new lands. One such expedition left Callao, Peru, in December 1605 under Pedro Fernandez de Quiros, a man of the Counter-Reformation who desired that Catholicism should prevail in the southland. De Quiros reached the New Hebrides and named the island group 'Australia del Espiritu Santo' and he and some later Catholic historians saw this as the discovery of Australia. But the more important voyage was probably that of the other ship of the expedition that continued after de Quiros himself was forced to return to the Americas. Under Luis Vaez de Torres, this other ship sailed through Torres Strait but almost certainly failed to sight Australia. Although both de Quiros and de Torres returned to Hispanic America with enthusiasm for further explorations, they both failed to persuade Spanish officialdom to this course.

Discoveries by the Dutch

A few weeks before de Torres, the Dutch vessel *Duyfken*, after coming along the south coast of New Guinea from the west, swung over to the west coast of Cape York Peninsula in or about March 1606. Under the command of Willem Jansz, the *Duyfken* traversed some 200 miles of the Australian coastline as far as Cape Keer-Weer (Turn Again) without actually discovering Torres Strait. Subsequent visits were made by other Dutch vessels sailing from the Cape of Good Hope to Java which were often carried too far east and hit Australia. The first and most famous of these was Dirk Hartog's *Eendracht*, from which men landed and left a memorial at Shark Bay, Western Australia in October 1616. Hartog was followed by Houtman (1619), Carstensz (1623), Nuyts (1626–27), Thijssen (1627), Pelsaert (1629), Tasman (1642) and others.

Most important of all was the work of Abel Tasman, who was such a well-respected seaman in the Dutch East Indies that the Governor-General of the Indies, Anthony van Diemen, commissioned him to undertake a southern exploration. In November 1642, having made a great circuit of the seas, Tasman sighted the west coast of what he called Van Diemen's Land (Tasmania). He then explored New Zealand before returning to Batavia. A second expedition in 1644 contributed to the knowledge of Australia's northern coast, and established the name of 'New Holland' for the southern landmass.

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 *Cygnet*. In 1699 he again visited Australia in command of HMS *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 from Tahiti the transit of Venus, had also the objective of ascertaining whether the unexplored part of the southern hemisphere did in fact contain another continent. In command of HMS *Endeavour*, and accompanied by botanist Sir Joseph Banks, naturalist Dr Daniel Solander, astronomer Charles Green, draughtsmen and servants, James Cook, after observing the transit of Venus at Tahiti, turned towards New Zealand, sighting that land on 7 October 1769 in the vicinity 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

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 7 February 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.

CHRONOLOGICAL TABLE OF MAJOR EVENTS IN AUSTRALIA SINCE 1788

1788
Arrival of 'First Fleet' at Botany Bay. Land in vicinity found unsuitable and the expedition moved to Sydney Cove on 26 January. Formal proclamation of the colony and the establishment of a regular government on 7 February.

1790
'Second Fleet' arrives with New South Wales Corps.

1791
'Third Fleet' arrives. Territorial seal brought by Governor King.

1792
Visit of the first foreign trading vessel, the *Philadelphia*.

1793
Arrival of the first free immigrants on the *Bellona*. First Australian church opened in Sydney.

1795
First printing press opened in Sydney.

1797
Introduction of merino sheep from the Cape of Good Hope. Coal discovered near Newcastle.

1798
Tasmania is proved to be an island by the voyage of Bass and Flinders.

1800
First Customs House established in Sydney.

1802
Discovery of Port Phillip.

1803
First Australian wool taken to England. Issue of the *Sydney Gazette*, the first Australian newspaper. First settlement at Port Phillip attempted.

1804
Hobart founded. Abandonment of settlement at Port Phillip.

1805
First extensive sheep farm established at Camden by Captain Macarthur.

1807
First shipment of merchantable wool from New South Wales to England.

1809
Free school established in Sydney.

1810
Post Office established in Sydney.

1813
Passage of the Blue Mountains discovered by Wentworth, Lawson and Blaxland.

1814
The name 'Australia', instead of 'New Holland', suggested by Flinders. Civil courts created.

1815
First free settlers arrive in Hobart.

1816
Sydney Hospital opened.

1817
First bank in Australia—Bank of New South Wales—opened in Sydney.

1821
Penal settlement at Macquarie Harbour in Tasmania established.

1823
New South Wales Judicature Act passed.

1824
New South Wales constituted a Crown Colony. Executive Council formed. Supreme Court at Sydney established, and trial by jury introduced. Penal settlement founded at Moreton Bay, Brisbane.

1825
Tasmania proclaimed a separate colony.

1827
First official claim of British sovereignty over all Australia.

1828
Second Constitution of New South Wales and first census.

1829
Foundation of Perth as a settlement on Swan River, Western Australia.

1830
Publication of *Quintus Servinton*, first novel to be published in Australia.

1831
SS Surprise, the first steamship built in Australia, launched at Sydney. First coal ship from Newcastle launched. First assisted immigration to New South Wales.

1835
Foundation of Melbourne.

1836
Foundation of Adelaide. Port Phillip (Victoria) district proclaimed as open for settlement.

1838
Assignment of convicts discontinued. Settlement at Port Essington, Northern Territory.

1840
Transportation of convicts to New South Wales abolished. Moreton Bay (Queensland) opened for free settlement.

1841
New Zealand proclaimed a separate colony from New South Wales.

1842
Incorporation of Sydney and incorporation of Melbourne.

1843
First Representative Constitution of New South Wales.

1847
Overland mail established between Sydney and Adelaide.

1849
Exodus of population to the goldfields of California. Transportation to Western Australia commenced.

1850
Final abolition of transportation to New South Wales. Sydney University founded. Representative government granted to Victoria and Tasmania.

1851
Gold discovered in New South Wales. Port Phillip created an independent colony under the name of Victoria. Legislative Council established in Western Australia.

1852
Arrival of *Chusan*, first P & O mail steamer from England.

1853
Transportation to Tasmania abolished. Melbourne University founded.

1854
Riots on the Ballarat goldfields and the Eureka Stockade stormed. Telegraph first used. First Australian Railway opened in Victoria.

1857
Manhood suffrage and vote by ballot introduced in Victoria.

1858
Manhood suffrage and vote by ballot introduced in New South Wales. Sydney, Melbourne and Adelaide linked by telegraph.

Population of Australia reached 1,000,000.

1859
Queensland proclaimed a separate colony.

1860
Burke and Wills expedition leaves Melbourne.

1861
Anti-Chinese riots on goldfields of New South Wales. Regulations introduced on Chinese immigration. Burke and Wills perish at Coopers Creek, South Australia. World's first freezing works built in Sydney, eventually leading to meat exports. First Melbourne Cup held.

1863
Intercolonial Conference in Melbourne.

1864
First sugar made from Queensland cane.

1866
Camels introduced to South Australia.

1867
First Royal visit to Australia. Protective tariff imposed.

1868
Hougomont, the last convict ship arrived in Western Australia.

1870
Intercolonial Exhibition held in Sydney. Imperial troops withdrawn from New South Wales. Intercolonial Congress in Melbourne.

1871
Permanent military forces raised in New South Wales.

1872
Telegraph cable from Java to Port Darwin. Transcontinental telegraph line completed.

1873
Intercolonial Conference at Sydney. Mail service with San Francisco inaugurated.

1874
Intercolonial Conference at Sydney. University of Adelaide founded.

1876
Completion of telegraph cable between Sydney and Wellington, New Zealand.

1877
Population of Australia reached 2,000,000.

1878
Chinese immigration to Queensland restricted. Telephone introduced to Australia.

1880
First telephone exchange opened in Melbourne. Federal Conference at Sydney and Melbourne. Women first admitted to universities.

1881
Censuses taken on same date in all colonies for the first time.

1883
New South Wales and Victoria linked by railway. Federal Conference held at Sydney.

1884
Federation Bill passed in Victoria but rejected in New South Wales. British protectorate declared over New Guinea.

1885
Australian contingent sent to the war in Sudan.

1887
First 'Colonial' Conference held in London.

1888

Railway communication opened between Sydney and Brisbane. World Expo held in Melbourne to commemorate Australia's centenary.

1889

A new Constitution framed in Western Australia. Railway communication opened between Melbourne and Adelaide.

Population of Australia reached 3,000,000.

1890

Western Australia granted responsible government. Australasian Federation Conference at Melbourne. University of Tasmania founded.

1891

First Federal Convention at Sydney, draft Bill framed and adopted. Assisted immigration to New South Wales ceased.

1893

Financial crisis in eastern States.

1894

Women's suffrage granted in South Australia—first Australian State to do so.

1895

Conference of Premiers on Federation at Hobart. Land and income taxes introduced in New South Wales.

1897–98

Sessions of Federal Convention at Adelaide, Sydney and Melbourne.

1898

Draft Federal Constitution Bill rejected by New South Wales.

1899

Australian troops sent to war in South Africa. Conference of Premiers in Melbourne, Federal Constitution Bill amended.

1900

Naval troops sent to war in China. Commonwealth Constitution Act received Royal Assent, 9 July. Proclamation of the Commonwealth signed 17 September. Mr (later Sir) Edmund Barton formed the first Federal Ministry. Old age pension instituted in New South Wales.

1901

Commonwealth proclaimed at Sydney. First Commonwealth Parliament opened at Melbourne. Interstate free-trade established.

1903

The Federal High Court inaugurated.

1904

Commonwealth Conciliation and Arbitration Act passed.

1905

Census and Statistics Act. Assisted immigration to New South Wales re-introduced.

Population of Australia reached 4,000,000.

1906

Papua taken over by the Commonwealth of Australia.

1907

First telephone trunk line service between the capital cities. Imperial Conference in London.

1908

Canberra chosen as the site of the Australian Capital.

1909

Imperial Defence Conference in London. Queensland University founded. The Commonwealth Age Pension Scheme introduced.

1910

Penny postage. Australian Notes Act passed and the first Commonwealth notes issued. Arrival of the first vessels built for the Royal Australian Navy, the *Yarra* and the *Parramatta*.

1911

First Commonwealth Census taken. The Australian Capital Territory and the Northern Territory transferred to the Commonwealth. Compulsory military training introduced.

1912

Commonwealth Bank opened. First payments of Maternity Bonus. University of Western Australia founded.

1913

Canberra officially named as the Australian Capital and the foundation stone laid.

1914

Norfolk Island transferred to the Commonwealth. War declared in Europe on 4 August. Australian and New Zealand Army Corps (ANZAC) formed. Australia's first aerial mail, flown from Melbourne to Sydney.

1915

ANZAC troops landed at Gallipoli, 25 April. Evacuated 18–20 December. Commonwealth Census planned but shelved. Broken Hill Proprietary's ironworks at Newcastle, New South Wales, opened.

1916

Australian and New Zealand mounted troops in Egypt, Palestine and Syria. First proposal for compulsory military service overseas defeated by referendum.

1917

Second referendum on conscription for overseas service defeated. Transcontinental railway completed.

1918

Australian divisions in France blunt the German offensive. Australia House opened in London. Armistice with Germany, 11 November.

Australia's population reached 5,000,000.

1919

Peace Conference. Peace Treaty signed at Versailles, 28 June. Flight from England to Australia by Captain Ross Smith and Lieutenant Keith Smith.

1920

Imperial Statistical Conference in London. Qantas began operations.

1921

Mandate given to Australia over the Territory of New Guinea. Second Commonwealth Census.

1922

Queensland Legislative Council abolished.

1923

First Australian radio broadcast.

1925

Australian population reached 6,000,000.

1926

Council for Scientific and Industrial Research (CSIR) established.

1927

Seat of Commonwealth Government transferred from Melbourne to Canberra.

1929

Peace-time compulsory military training abolished in favour of a voluntary system.

1930

World-wide economic depression reached Australia. First Australian appointed Governor-General of Australia (Rt Hon. Sir Isaac Alfred Isaacs, GCMG, Chief Justice of the High Court).

1932

Sydney Harbour Bridge opened. The Australian Broadcasting Commission established. Imperial Economic Conference held in Ottawa.

1933

World Economic Conference held in London. Antarctica and Ashmore and Cartier islands taken over by the Commonwealth. Third Commonwealth Census.

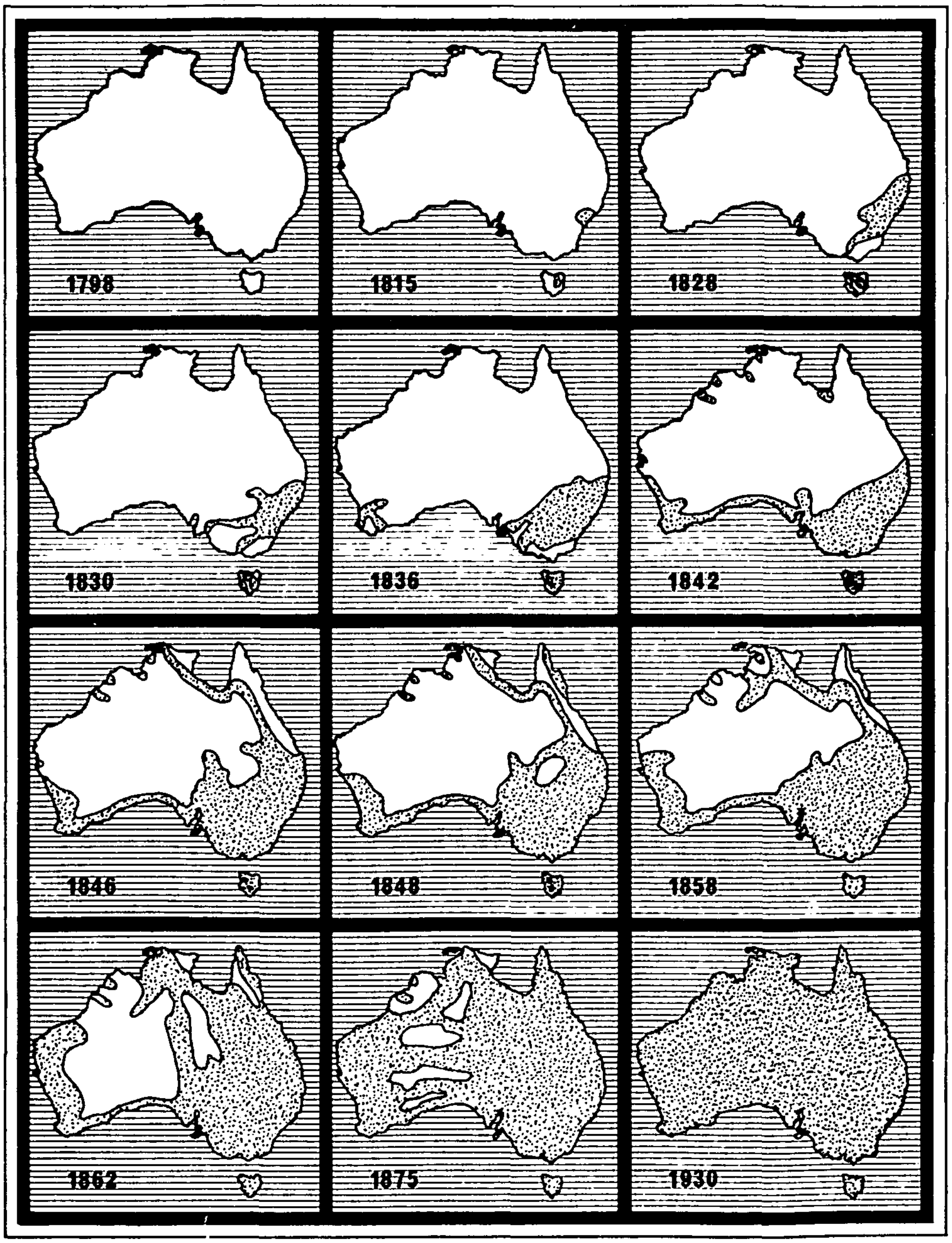
1934

England–Australia Air Mail Service inaugurated.

1935

Empire Statistical Conference at Ottawa.

EXPLORATION OF AUSTRALIA



1936

Tasmania linked with the mainland by submarine telephone cable.

1937

Imperial Conference in London.

1938

New trade treaty with Japan.

1939

War declared on Germany, 3 September. Australian troops embarked for the Middle East, 15 December.

Australia's population reached 7,000,000.

1940

Exchange of Ministers between Australia and the United States marked Australia's entry into the field of direct diplomatic representation with countries other than the United Kingdom. First Australian convoy sailed for Middle East.

1941

Australian Eighth Division arrived in Malaya. Japan attacked Pearl Harbour, Malaya, Thailand, Hong Kong and the Philippines. Australia declared war on Japan, 9 December. Establishment of Child Endowment scheme.

1942

General Douglas Macarthur set up headquarters of South West Pacific Command in Melbourne. Battle of the Coral Sea. Federal uniform taxation adopted. Commonwealth widows' pension introduced.

1944

Referendum refused Commonwealth Government increased power in the post-war period.

1945

Australia ratified the United Nations Charter. War in Europe ceased, 8 May. War in Pacific ceased, 15 August. Banking Act introduced to regulate banking and to protect the currency and public credit.

1946

The Commonwealth Employment Service inaugurated. Trans Australian Airlines began operations. Constitution Alteration Referendum granted powers with regard to social services to the Commonwealth Government.

1947

End of demobilisation. Census of Australia held.

1948

Forty-hour week effective throughout Australia. First Holden motor car produced.

1949

Nationality and Citizenship Act operative. Certain Aboriginals granted franchise at Federal elections for the first time. Coal miners strike over hours, wages and leave claims. Australian Whaling Commission established. The Snowy Mountains Hydro-Electric Power Scheme commenced.

Australia's population reached 8,000,000.

1950

Severe floods in New South Wales. Australian forces joined the British Commonwealth Brigade in the Korean War. Conference of Commonwealth Prime Ministers in London.

1951

Jubilee celebrations marked the fiftieth year of Australian Federation. Heard Island and the McDonald Islands transferred to the Commonwealth. Hostilities with Germany officially ceased. Japanese Peace Treaty signed. Third Conference of Government Statisticians of the British Commonwealth held in Canberra.

1952

Widespread bushfires in Victoria, New South Wales and the Australian Capital Territory. Third British Commonwealth Scientific Official Conference held in Canberra and Melbourne. Uranium deposits discovered at Rum Jungle, Northern Territory. British detonate atomic weapon on Monte Bello Islands off the north-west coast. British Commonwealth Economic Conference in London.

1953

Television Act authorised the establishment of both Government and Commercial television stations. Northern Territory Aboriginals given citizenship rights. Atomic Energy Commission established. Korean armistice signed.

1954
Australian Census taken. Transfer of Cocos Islands to the Commonwealth proposed. Queen Elizabeth II became the first reigning monarch to visit Australia.

1955
Food and Agriculture Organization Conference held in Brisbane. Australian troops sent to Malaya. Cocos (Keeling) Islands became a Commonwealth Territory. First power generated by the Snowy Mountains Hydro-Electric Authority.

Australian population reached 9,000,000.

1956
Olympic Games held in Melbourne. Bilateral agreement signed between Australia and the United States for peaceful uses of atomic energy. Regular television transmissions commenced.

1958
Lucas Heights nuclear reactor opened near Sydney. Christmas Island transferred to Commonwealth administration.

1959
Population of Australia reached 10,000,000.

1960
Provision made for Social Service benefits to be paid to Australian Aboriginals.

1961
Oil is discovered in south-west Queensland. Iron-ore deposits estimated at 1,800 million tons discovered at Pilbara, Western Australia. Population Census taken.

1962
Commonwealth and Western Australian Electoral Acts amended to provide for votes for Aboriginals. Aboriginals exercise voting rights in the Northern Territory for first time.

1963
Australia signed Nuclear Test Ban Treaty.

Australian population reached 11,000,000.

1964
RAN Destroyer *Voyager* sunk in collision. Army send advisers to Vietnam.

1965
Royal Australian Mint opened. Australian troops go to war in Vietnam. First trade agreement between Australia and the USSR. Economic sanctions imposed on Rhodesia.

1966
Australia adopted decimal currency. Census of population held. Permanent employment of married women by Australian Government proclaimed.

1967
Worst bushfires in the history of Tasmania damaged Hobart and southern Tasmania. New white ensign adopted by the RAN. Australia launched its first satellite at Woomera.

1968
Australian population reached 12,000,000.

1969
The Arbitration Commission handed down its decision on equal pay for women. Bass Strait under-sea oil piped to shore for the first time.

1970
Australia signed the Nuclear Non-Proliferation Treaty. Coal miners in three States are awarded a 35 hour working week. Voting age reduced to 18 in Western Australia.

1971
Australia joined the OECD. Population Census held. Australian troops withdrew from Vietnam. Daylight saving adopted in New South Wales, Victoria and the Australian Capital Territory.

Australian population reached 13,000,000.

1972
Female employees received full entitlement to equal pay. Celsius adopted in lieu of the Fahrenheit thermal measure. Australian Labor Party won Federal election for first time in 23 years. Australia established diplomatic relations with the People's Republic of China and the German Democratic Republic.

1973

Papua New Guinea attained self-government. All tariffs cut by 25 per cent. First meeting of the Aboriginal Consultative Committee.

1974

Major floods and storms caused damage in the eastern States. Cyclone Tracey hits Darwin. Plans announced for maximum security laboratory to protect livestock against exotic diseases. Colour television introduced.

1975

Medibank introduced. Commonwealth Parliament dissolved and the Australian Labor Party defeated at a general election on 13 December. Papua New Guinea ceased to be an Australian territory and became an independent nation. Australia Council created.

1976

Census of Australia held. Australian Savings Bonds introduced.

Australian population reached 14,000,000.

1977

Aboriginal Land Rights Act passed. Granville rail disaster claimed 80 lives.

1978

Northern Territory gained self-government. Commonwealth Government recognised the absorption of Timor into Indonesia. 'Boat people', refugees from Indo–China arrived in large numbers.

1979

Series of serious strikes in opposition to Fraser Government's economic policies. Severe bushfires threatened Sydney. Tasmanian Hydro-Electric Commission released a report recommending a massive power development scheme in south-west Tasmania, sparking the commencement of the controversial 'Save the Franklin' campaign.

1980

Whale Protection Act passed. Multicultural television broadcasting commenced. Drought takes hold across Australia. Fraser Government returned to office.

1981

Census of Australia held. (Campbell) Committee of Inquiry into the Australian Financial System recommended deregulation.

Australian population reached 15,000,000.

1982

Australian economy depressed. Severe drought in the eastern States. Australian National Gallery opened in Canberra. Commonwealth Games held in Brisbane. Freedom of Information Act became operative.

1983

General election held, resulting in an Australian Labor Party victory. Australia won the Americas Cup. Severe bushfires in Victoria and South Australia. Medicare introduced. Prices Surveillance Authority created. Cocos (Keeling) Islanders voted to integrate with Australia. Royal Commission into British Nuclear Tests in Australia established.

1984

Nuclear Disarmament Party (NDP) formed. Hawke Government returned to office. Referenda on State–Commonwealth transfer of powers and the simultaneous election of the House of Representatives and the Senate rejected. Parliament increased in size: House of Representatives from 125 to 148 and Senate from 64 to 76. World's first frozen embryo baby born in Melbourne.

1985

Ban placed on uranium exports to France. Substantial deregulation of the banking system. Economic summit on tax reform. Split in the Nuclear Disarmament Party. Report of the Royal Commission into British Nuclear Tests in Australia tabled in Parliament.

1986

Constitutional severance from the United Kingdom. Car bomb exploded at Turkish Consulate in Melbourne. Census held. Sighting of Halley's Comet. Twelve miners died in a mine cave-in at Moura, Queensland. Bomb exploded at Melbourne Police Headquarters. Pope visited Australia. Aussat launched.

Australia's population reached 16,000,000.

1987

Hawke Government returned to power in July general election. Australia lost Americas Cup. Prime Minister Hawke announced plans to streamline government administration.

1988
Bicentennial Year. Celebrations included the re-enactment of the First Fleet's voyage and the staging of Expo 88 in Brisbane. Referendum held on four Constitutional amendments soundly defeated.

1989
Thirteen people died in Australia's first ballooning accident. Two major bus accidents on the Pacific Highway claimed the lives of 55 people. Thirteen people died and over 130 injured in Newcastle earthquake. Pilots dispute disrupted air travel for three months.

1990
Australia's first female premiers were elected in Western Australia and Victoria. Several major national corporations and financial institutions collapsed.

Australia's population reached 17,000,000.

Sources: Keesing's Contemporary Archives: Record of World Events. The Annual Register: A Record of World Events. Year Book Australia. Acts of the Parliament of the Commonwealth.

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 William 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.

The eastern rivers and to the south

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

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 Alexandrina 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 tonnes 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 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.

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.

North-eastern Australia

In 1844 Ludwig Leichhardt left Jimbour Station on the Darling Downs, to lead an expedition on an epic fourteen and a half 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. Ironically, 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 to 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 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.

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 were 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 opened 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.

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.

Tasmania

In 1793 Lieutenant John Hayes, commander of the *Duke of Clarence* expedition, sailed up the Derwent River to the foot of Mount 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 up the remaining Tasmanian Aboriginals 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 1860s and 1870s 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 Mount 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 Federal Movement in Australia

Due to the size of the Australian continent and the circumstances surrounding the establishment of the various settlements, the initial tendency was toward individual evolution of the separate colonies. However, it was not long before the importance of intercolonial relationships was clearly recognised.

Governor Fitzroy, in 1846, and Earl Grey, in 1847, saw that there were questions which affected 'Australia collectively, the regulation of which in some uniform manner, and by some single authority, may be essential to the welfare of them all', and a 'central legislative authority for the whole of the Australian colonies' was actually contemplated. Even as far back as 1849, a Privy Council Committee recommended a uniform tariff, and the constituting of one of the Governors as Governor-General of Australia, Sir Charles Fitzroy being actually appointed as 'Governor-General of all her Majesty's Australian Possessions'. The office, however, was nominal rather than actual, and expired in 1861. Dr Lang's idea of 'a great federation of all the colonies of Australia' was put forward in 1852, and a Victorian committee in 1853 advocated the value of a General Assembly of Delegates for the whole of Australia.

The need of union was urged by the *Sydney Morning Herald* in 1854, and although Wentworth sought in 1857 to bring about the creation of a Federal Assembly, a draft 'Enabling Bill' proved unacceptable to Her Majesty's Government. In the same year Mr (afterwards Sir) Charles Gavan Duffy secured the appointment of a select committee of the Victorian Legislative Assembly to consider the necessity of a federal union of the Australasian colonies. The need for such a union was unanimously affirmed, the general opinion being that it should not be longer delayed. In the same year, a select committee of the New South Wales Legislative Council also considered this question, fully recognising that antagonisms and jealousies were likely to arise through delay.

Union was a fair way towards realisation when the advent of the Cowper Administration destroyed all chance of attaining it, owing to the antagonism of Mr Cowper and Mr (afterwards Sir) James Martin. South Australia, also in the same year, and Queensland in 1859, were both unfavourable to the federal scheme. A second attempt by Mr Duffy to bring about a conference in 1860 failed also.

Tariff differences, however, compelled political attention to the matter, and in 1862 correspondence was opened up by South Australia regarding tariff uniformity. By means of Intercolonial Conferences between 1863 and 1880 some degree of uniformity in legislation and a measure of concerted administration were realised. In March 1867, Mr (afterwards Sir) Henry Parkes expressed himself as follows:

> ... The time has arrived when these colonies should be united by some federal bond ... There are questions projecting themselves ... which cannot be dealt with by ... individual Governments ... I believe it will lead to a permanent federal understanding.

The Federal Council

The conference of November–December 1880 and January 1881 recommended the creation of a federal council, believing that the time had not arrived for a federal constitution with a federal parliament. Until 1883, however, every effort proved abortive. In November of that year, a convention, at which the seven colonies and Fiji were represented, met in Sydney. A Bill to establish the Federal Council for Australasia, drafted by Mr (later Sir) Samuel Griffith was, after some modification by a committee of the convention, adopted. In July and August 1884, the Crown was addressed, requesting the enactment of a Federal Council Act. New South Wales and New Zealand, however, endorsed the view of Sir Henry Parkes that a 'Council' would impede the way for a sure and solid federation. The Bill, introduced by the Earl of Derby in the House of Lords on 23 April 1885, became law on 14 August as *The Federal Council of Australasia Act 1885*. The Council's career, however, soon showed that it could not hope to be effective and it met for the last time in January 1899.

Formative stages of the federal movement

As early as 1878, the necessity for federal defence was vividly brought into Australian consciousness, and arrangements for naval protection were entered into with the Imperial Government. These were ratified by the Australasian Naval Force Act. Queensland however, did not come into line until 1891.

Early in 1889, Sir Henry Parkes had suggested to Mr Duncan Gillies the necessity for a federal parliament and executive. Unable to accept the latter's suggestion that New South Wales should give its adhesion to the Federal Council, the former Statesman urged the institution of 'a National Convention for the purpose of devising and reporting upon an adequate scheme of Federal Government'. This led to the Melbourne Conference of 6 February 1890. It was at the banquet of this occasion that, in proposing 'A United Australasia', Mr James Service pointed out that the tariff question was 'a lion in the path', which federationists must either slay or by which they must be slain. In the reply Sir Henry Parkes made use of his historic phrase, 'the crimson thread of kinship runs through us all'. Certain elements of doubt being expressed as to the motives underlying the movement, Sir Henry Parkes said:

> We desire to enter upon this work of Federation without making any condition to the advantage of ourselves, without any stipulation whatever, with a perfect preparedness to leave the proposed convention free to devise its own scheme, and, if a central Parliament comes into existence, with a perfect reliance upon its justice, upon its wisdom, and upon its honour ... I think an overwhelming majority of my countrymen ... will approve of the grand step ... uniting all the colonies under one form of beneficient government, and under one national flag.

The first National Australasian Convention, under Sir Henry Parkes' presidency, was convened on 2 March 1891, all the Australian colonies and New Zealand being represented. The Bill then drafted was considered by the Parliaments of New South Wales, Victoria, South Australia and Tasmania, but not by those of Queensland, Western Australia and New Zealand, and though the parliamentary process of dealing with the matter failed, federal sentiment was strengthening. The collapse of the 'land boom' had made apparent how intimately the interests of the several colonies were related, and the dangers of disunion became impressively obvious. The Australian Natives' Association took up the federal cause with enthusiasm. Federation leagues were established. Federal issues were widely and intelligently discussed. The unification scheme of Sir George Dibbs helped to make the issue a real one.

At the Conference of Premiers at Hobart on 29 January 1895, it was agreed that Federation 'was the great and pressing question of Australian politics', and that 'the framing of a Federal Constitution' was an urgent duty. The resuscitation of the whole matter led to the passing of Enabling Acts. In New South Wales, the Act received the Royal assent on 23 December 1895; South Australia anticipated this by three days; the Tasmanian Bill was passed on 10 January 1896; the Victorian on 7 March 1896 and Western Australia fell into line on 27 October 1896. The 'People's Federal Convention' held at Bathurst, New South Wales, in November 1896, gave a considerable impulse to the movement; to wait longer for Queensland was considered unnecessary. March 4 1897 was fixed as the date for the election of federal representatives for New South Wales, Victoria, South Australia and Tasmania. Western Australia followed suit, and on 22 March the representatives met at Adelaide.

The discussions made it evident that the federal point of view had advanced considerably. Constitutional, Finance, and Judiciary Committees were appointed, and a Bill was drafted. This, reported to the Convention on 22 April, was adopted on the following day, and the Convention adjourned until September. The Parliaments of New South Wales, Victoria, South Australia, Tasmania and Western Australia discussed the question before the Sydney Session of the Convention, which opened on 2 September 1897. The business of the Convention involved the general reconsideration of the whole Bill, and the consideration of no less than 286 suggested amendments. This work gave a definite character to that of the Melbourne Session of 1898, extending from 20 January to 17 March, the necessity for reaching a final decision giving weight to its deliberations.

Votes on the question of Federation

Eleven weeks after this last convention the first popular vote was taken on Federation in New South Wales, Victoria, South Australia and Tasmania. Though the decision was overwhelmingly in favour of Federation in three of the States, and there was a distinct majority in its favour in New South Wales, the majority was legally insufficient. On 22 January 1899, the Premiers of the six colonies met at Melbourne in a conference initiated by the Right Honourable G.H. Reid, PC, and seven amendments were made to the Bill. This step virtually effected the solution of the few outstanding difficulties which could in any way be regarded as fundamental.

On the occasion of the second popular vote, Queensland also joined in. The general majority in favour of Federation was more than doubled, that for New South Wales itself having been more than quadrupled when compared with the first vote. The following table shows the two results.

VOTES FOR AND AGAINST FEDERATION

Votes		*NSW*	*Vic.*	*SA*	*Tas.*	*Qld*	*Total*
	For Federation	71,595	100,520	35,800	11,797	—	219,712
1st Vote	Against	66,228	22,099	17,320	2,716	—	108,363
	Majority	5,367	78,421	18,480	9,081	—	111,349
	For Federation	107,420	152,653	65,990	13,437	38,488	377,988
2nd Vote	Against	82,741	9,805	17,053	791	30,996	141,386
	Majority	24,679	142,848	48,937	12,646	7,492	236,602

Enactment of the Constitution

The Secretary of State for the Colonies (the Right Honourable Joseph Chamberlain), on 22 December 1899 expressed the hope that a delegation of the federating colonies would visit England on the occasion of the submission of the Commonwealth Bill to the Imperial Parliament. The delegation consisted of Mr (later Sir) Edmund Barton (NSW), Mr Alfred Deakin (Vic.), Mr C.C. Kingston (SA), Sir P.O. Fysh (Tas.), and later Mr S.H. Parker was appointed delegate for Western Australia, and Mr W.P. Reeves for New Zealand. After discussion as to whether there should be some modification in the Bill, it was introduced into the House of Commons on 14 May; the second reading was moved on 21 May; the discussion in committee commenced on 18 June; and the Royal assent was given on 9 July 1900.

On 31 July a referendum in Western Australia on the question of federating gave the result: for, 44,800; against, 19,691; that is a majority of 25,109 in favour of union. On 21 August both Houses of Parliament in that State passed addresses praying that it might be included as an original State of the Commonwealth.

On 17 September 1900, Her Majesty Queen Victoria signed the proclamation declaring that on and after the first day of January 1901, the people of New South Wales, Victoria, South Australia, Queensland, Tasmania and Western Australia should be united in a federal Commonwealth, under the name of the Commonwealth of Australia.

More detail on the federal movement can be found in *Year Book* No. 1.

The Establishment of the Commonwealth of Australia

On 1 January 1901, the designation of 'Colonies'—except in the case of the Northern Territory, to which the designation 'Territory' applied—was 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.

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^2*
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
Australia	..	..	..	(d)	**7,681,800**

(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.

2

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 Queen, the Senate and the House of Representatives. The Queen is represented throughout the Commonwealth by the Governor-General. In each Australian State there is a State Governor, who is the representative of the Queen 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 Queen, detailing the manner in which his duties are to be fulfilled.

No Act of the Parliament of the United Kingdom passed after the commencement of the *Australia Act 1986* extends, or is deemed to extend, to the Commonwealth of Australia or to an Australian State or Territory as part of the law of the Commonwealth, of the State or of the Territory. Further, the restrictions that formerly existed on the legislative powers of the Parliaments of the States were removed by the Act.

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 and Western Australia as the Legislative Assembly; and in the State Parliaments of South Australia and Tasmania as the House of Assembly. The single House of Parliament in Queensland is known as the Legislative 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 Electoral 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 as 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 that 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 of Australia, and certain other powers and functions conferred by the Constitution that 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 the Governor-General's pleasure; and to appoint Ministers of State for the Commonwealth of Australia. In addition, the commander-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 provisions of the Constitution, as well as by the conventions of responsible government in British Commonwealth countries, the Governor-General's executive functions are exercised on the advice of Ministers of State.

The present Governor-General is His Excellency the Honourable William George Hayden AC, who replaced Sir Ninian Martin Stephen, AK, GCMG, GCVO, KBE on 16 February 1989.

Holders of office

Those persons who have held the office of Governor-General from the inception of the Commonwealth of Australia are pictured in *Year Book* No. 71.

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 from office or absence from Australia of the Governor-General.

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 the Commonwealth *Australia Act 1986,* 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. Since the enactment of the Australia Act, an Act of Parliament of a State that has been assented to by the Governor of the State is no longer subject to disallowance by the Queen or suspension pending signification of the Queen's pleasure. The Governor 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.

STATE GOVERNORS, HOLDERS OF OFFICE, JUNE 1990

New South Wales	His Excellency REAR ADMIRAL PETER SINCLAIR, AO
Victoria	His Excellency DR DAVIS McCAUGHEY, AC
Queensland	His Excellency the Honourable SIR WALTER BENJAMIN CAMPBELL, QC
Western Australia	His Excellency the Honourable SIR FRANCIS THEODORE PAGE BURT, AC, KCMG, QC
South Australia	His Excellency LT-GEN. SIR DONALD BEAUMONT DUNSTAN, KBE, CB
Tasmania	His Excellency GENERAL SIR PHILLIP BENNETT, AC, KBE, DSO

Commonwealth Government Ministries

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 1990

(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

COMMONWEALTH GOVERNMENT MINISTRIES, 1901 TO 1990—*continued*

(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 7 May 1982
(xlvii)	FRASER MINISTRY	7 May 1982 to 11 March 1983
(xlviii)	HAWKE MINISTRY	11 March 1983 to 13 December 1984
(xlix)	HAWKE MINISTRY	13 December 1984 to 24 July 1987
(l)	HAWKE MINISTRY	24 July 1987 to 4 April 1990
(li)	HAWKE MINISTRY	4 April 1990

In *Year Book* No. 17, 1924, the names are given of each Ministry up to the Bruce–Page Ministry 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 Fourth Hawke Ministry (at June 1990).

LEADERS OF THE GOVERNMENT, JUNE 1990

Commonwealth	THE HON. R.J.L. HAWKE, AC, MP (VIC.) (ALP)
New South Wales	THE HON. N.F. GREINER, MLA (LP)
Victoria	THE HON. J. CAIN, MLA (ALP)
Queensland	THE HON. W.K. GOSS, MLA (ALP)
Western Australia	THE HON. C.M. LAWRENCE, MLA (ALP)
South Australia	THE HON. J.C. BANNON, MP (ALP)
Tasmania	THE HON. M.W. FIELD, MHA (ALP)
Northern Territory	THE HON. M. PERRON, MLA (CLP)
Australian Capital Territory	THE HON. T.T. KAINE, MLA (LP)

COMMONWEALTH GOVERNMENT

Fourth Hawke Ministry—at June 1990

* **Prime Minister**	**THE HON. R.J.L. HAWKE, AC, MP**
Parliamentary Secretary to the Prime Minister	**THE HON. R.V. FREE, MP**
* **Deputy Prime Minister** **Treasurer** **Minister Assisting the Prime Minister for Commonwealth–State Relations**	**THE HON. P.J. KEATING, MP**
Parliamentary Secretary to the Treasurer	**SENATOR THE HON. R.F. MCMULLAN**
* **Leader of the Government in the Senate** **Minister for Industry, Technology and Commerce**	**SENATOR THE HON. J.N. BUTTON**
Minister for Science and Technology, Minister Assisting the Prime Minister for Science Minister Assisting the Treasurer	**THE HON. S.F. CREAN, MP**

NOTE: * Minister in the Cabinet

COMMONWEALTH GOVERNMENT

Fourth Hawke Ministry—at June 1990—*continued*

* **Deputy Leader of the Government in the Senate**	SENATOR THE HON. G.J. EVANS, QC
Minister for Foreign Affairs and Trade	
* Minister for Trade Negotiations	THE HON. N. BLEWETT, MP
Minister Assisting the Minister for Industry, Technology and Commerce	
Minister Assisting the Minister for Primary Industries and Energy	
* **Minister for Finance**	THE HON. R. WILLIS, MP
* **Attorney-General**	THE HON. M.J. DUFFY, MP
Minister for Justice and Consumer Affairs	SENATOR THE HON. M.C. TATE
* **Minister for Employment, Education and Training**	THE HON. J.S. DAWKINS, MP
Minister for Employment and Education Services	THE HON. P.J. BALDWIN, MP
Minister for Aboriginal Affairs	THE HON. R.E. TICKNER, MP
* **Minister for Transport and Communications**	THE HON. K.C. BEAZLEY, MP
Vice-President of the Executive Council	
Leader of the House	
Minister for Shipping	SENATOR THE HON. R.L. COLLINS
Minister Assisting the Prime Minister for Northern Australia	
Minister for Land Transport	THE HON. R.J. BROWN, MP
Parliamentary Secretary to the Minister for Transport and Communications	THE HON. W.E. SNOWDON, MP
* **Minister for Primary Industries and Energy**	THE HON. J.C. KERIN, MP
Minister for Resources	THE HON. A.G. GRIFFITHS, MP
* **Minister for Community Services and Health**	THE HON. B.L. HOWE, MP
Minister Assisting the Prime Minister for Social Justice	
Minister for Housing and Aged Care	THE HON. P.R. STAPLES, MP
Minister for Veterans' Affairs	THE HON. B.C. HUMPHREYS, MP
* **Minister for Social Security**	SENATOR THE HON. G.F. RICHARDSON
Parliamentary Secretary to the Minister for Social Security	THE HON. C. SCIACCA, MP
* **Minister for Defence**	SENATOR THE HON. R.F. RAY
Manager of Government Business in the Senate	
Minister for Defence Science and Personnel	THE HON. G.N. BILNEY, MP
* **Minister for Immigration, Local Government and Ethnic Affairs**	THE HON. G.L. HAND, MP
Minister Assisting the Prime Minister for Multicultural Affairs	
Minister for Local Government and Minister Assisting the Prime Minister for the Status of Women	THE HON. W.F. FATIN, MP
* **Minister for the Arts, Sport, the Environment, Tourism and Territories**	THE HON. R.J. KELLY, MP
Minister for the Arts, Tourism and Territories	THE HON. D.W. SIMMONS, MP
* **Minister for Industrial Relations**	SENATOR THE HON. P.F.S. COOK
Minister Assisting the Prime Minister for Public Service Matters	
***Minister for Administrative Services**	SENATOR THE HON. N. BOLKUS

NOTE: * Minister in the Cabinet

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 as at June 1990.

LEADERS OF THE OPPOSITION, JUNE 1990

Commonwealth	DR J.R. HEWSON, MP (LP)
New South Wales	R.J. CARR, MLA (ALP)
Victoria	THE HON. A.J. BROWN, MLA (LP)
Queensland	THE HON. R. COOPER, MLA (NP)
Western Australia	THE HON. B.J. MACKINNON, MLA (LP)
South Australia	D.S. BAKER, MHA (LP)
Tasmania	THE HON. R.T. GRAY, MHA (LP)
Northern Territory	T.E. SMITH, MLA (ALP)
Australian Capital Territory	THE HON. R. FOLLETT, MLA (ALP)

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, each provision to operate, however, 'until the Parliament otherwise provides'.

Subsequently, the number and salaries have increased from time to time, and as at 1 July 1990 the number of Ministers was 29 and ministerial salaries ranged from $93,838 for the Prime Minister, $60,885 for the Deputy Prime Minister, $49,623 for the Treasurer and for the Leader of the Government in the Senate, $44,038 for the Leader of the House, and $41,032 for a Minister other than the above. Where more than one office is held only one salary is payable, that being the higher salary.

All amounts shown in the foregoing paragraphs are in addition to amounts payable as Parliamentary salaries and allowances.

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 HRH the Duke of Cornwall and York. The Rt Hon. Sir Edmund Barton, GCMG, KC, was Prime Minister.

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

COMMONWEALTH PARLIAMENTS

Number of Parliament	*Date of opening*	*Date of dissolution*
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

For footnotes *see* end of table.

COMMONWEALTH PARLIAMENTS—*continued*

Number of Parliament	*Date of opening*	*Date of dissolution*
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	5 June 1987 *(a)*
Thirty-fifth	14 September 1987	19 February 1990
Thirty-sixth	8 May 1990	—

(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-fifth Parliament opened on 14 September 1987 and ended on 19 February 1990 when the House of Representatives was dissolved. Writs were issued by the Governor-General on 19 February 1990 for elections in all States and Territories. The election was announced for 24 March 1990. The thirty-sixth Parliament opened on 8 May 1990.

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 before 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 six, 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 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 total 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 has taken place in 1949, 1955, 1968, 1974 (Western Australia only), 1977, 1979 (Western Australia only), 1984, and 1988 (Victoria and Western Australia only). The quota (or average number) of electors is the basis for electoral distribution. The Redistribution Committee may vary the enrolment of electorates by up to 10 per cent in order to achieve equality in enrolment midway between redistributions and to take account of 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 tenth 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 three most recent determinations are shown in the following table.

REPRESENTATION ENTITLEMENTS OF THE STATES

State	*1981*	*1984*	*1988*
New South Wales	43	51	51
Victoria	33	39	38
Queensland	19	24	24
South Australia	11	13	13
Western Australia	11	13	14
Tasmania	5	5	5
Total	**122**	**145**	**145**

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 was granted full voting rights on 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.

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 1984 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, 24 MARCH 1990

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Australia*
				HOUSE OF REPRESENTATIVES					
Electors enrolled	3,630,841	2,781,547	1,805,141	966,431	982,901	310,076	78,994	172,200	10,728,131
Number of votes recorded for—									
Australian Labor Party	1,380,780	951,674	695,291	339,218	316,186	115,053	34,106	71,830	3,904,138
Liberal Party	975,083	1,018,740	476,560	381,172	392,870	140,722	..	55,755	3,440,902
National Party	377,687	154,069	280,120	..	21,681	..	..	..	833,557
Country National Party	..	..	..	..	..	..	27,668	..	27,668
Australian Democrats	342,540	319,149	193,817	135,546	75,197	24,876	..	23,091	1,114,216
Call to Australia	21,646	52,554	..	22,297	..	..	..	..	96,497
Others	256,935	70,944	25,809	15,521	88,765	8,853	6,483	9,386	482,696
Formal votes	*3,354,671*	*2,567,130*	*1,671,597*	*893,754*	*894,699*	*289,504*	*68,257*	*160,062*	*9,899,674*
Informal votes	108,134	94,334	38,065	34,143	34,418	9,774	2,387	4,871	326,126
Total votes recorded	**3,462,805**	**2,661,464**	**1,709,662**	**927,897**	**929,117**	**299,278**	**70,644**	**164,933**	**10,225,800**
				SENATE					
Electors enrolled	3,630,841	2,781,547	1,805,141	966,431	982,901	310,076	78,994	172,200	10,728,131
Number of votes recorded for—									
Australian Labor Party	1,356,430	938,245	653,070	337,137	304,632	120,195	37,343	66,495	3,813,547
Liberal Party	..	..	490,523	376,073	392,820	128,374	..	58,082	1,445,872
National Party	..	..	227,696	3,667	26,801	..	..	..	258,164
Liberal–National Party	1,280,382	1,149,170	..	..	..	..	..	..	2,429,552
Country Liberal Party	..	..	..	..	..	..	29,045	..	29,045
Australian Democrats	393,521	365,376	209,030	149,158	85,324	22,888	..	28,510	1,253,807
Call to Australia	69,744	29,608	18,469	18,701	..	..	..	..	136,522
Western Australian Green Party	..	..		..	76,381	..	..	..	76,381
Environment Independents	27,046	16,655	30,967	..	..	..	..	..	74,668
Others	211,019	80,466	44,441	23,387	22,140	19,835	2,335	8,584	412,207
Formal votes	*3,338,142*	*2,579,520*	*1,674,196*	*908,123*	*908,098*	*291,292*	*68,723*	*161,671*	*9,929,765*
Informal votes	145,429	96,171	42,112	23,438	26,733	9,300	1,977	3,905	349,065
Total votes recorded	**3,483,571**	**2,675,691**	**1,716,308**	**931,561**	**934,831**	**300,592**	**70,700**	**165,576**	**10,278,830**

The state of the parties in each House at the commencement of the thirty-sixth Parliament was: Senate (after 1 July 1990)—Australian Labor Party 32; Liberal Party of Australia 29; National Party of Australia 5; Australian Democrats 8; Independents 2; House of Representatives—Australian Labor Party 78; Liberal Party of Australia 55; National Party of Australia 14; Independents 1.

Parliamentary salaries and allowances

The basic salary payable to a Senator or Member of the House of Representatives was $58,300 at 1 July 1990. In addition, Senators or Members receive an electoral allowance of $22,685 in the case of a Senator or a Member representing an electorate of less than 2,000 square kilometres, $26,975 in the case of a Member representing an electorate of 2,000 square kilometres or more, but less than 5,000 square kilometres, or $32,895 in the case of a Member representing an electorate of 5,000 square kilometres or more.

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, 42 proposals have been submitted to referendums and the consent of the electors has been received in eight 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 Aboriginals 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—two prior to Federation regarding the proposed Constitution and two 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, *Year Book* No. 62, pages 72–73 and *Year Book* No. 70, pages 55–56.

The Parliaments of the States

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

STATE OF THE PARTIES IN COMMONWEALTH AND STATE PARLIAMENTS JULY 1990

Commonwealth			
House of Representatives—		*Senate—*	
ALP	78	ALP	32
LP	55	LP	29
NPA	14	AD	8
IND	1	NPA	5
		IND	2
New South Wales			
Legislative Assembly—		*Legislative Council—*	
ALP	43	ALP	21
LP	39	LP	12
NPA	20	NPA	7
IND	7	IND	3
		AD	2
Victoria			
Legislative Assembly—		*Legislative Council—*	
ALP	46	ALP	18
LP	33	LP	19
NPA	9	NPA	6
		IND	1
Queensland			
Legislative Assembly—			
ALP	54		
NPA	26		
LP	9		
South Australia			
House of Assembly—		*Legislative Council—*	
ALP	22	ALP	10
LP	22	LP	10
NPA	1	AD	2
IND	2		
Western Australia			
Legislative Assembly—		*Legislative Council—*	
ALP	31	ALP	16
LP	20	LP	15
NPA	6	NPA	3
Tasmania			
House of Assembly—		*Legislative Council—*	
LP	17	ALP	1
ALP	13	IND	18
IND	5		
Northern Territory			
Legislative Assembly—			
CLP	14		
ALP	7		
IND	2		
NTNP	2		
Australian Capital Territory			
Legislative Assembly—			
ALP	5		
LP	4		
RR	3		
IG	3		
ASGC	1		
IND	1		

NOTE: Explanation of abbreviations:
AD—Australian Democrats; ALP—Australian Labor Party; ASGC—Abolish Self-Government Coalition; CLP—Country-Liberal Party; IND—Independent; IG—Independents' Group; LP—Liberal Party; NDP—Nuclear Disarmament Party; NPA—National Party of Australia; NTNP—Northern Territory National Party; RR—Residents Rally.

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. The power of the States to make laws was enhanced in 1986 by the enactment by the Commonwealth Parliament of the *Australia Act 1986* and the accompanying *Australia (Request and Consent) Act 1986*. 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 of Commonwealth Parliament legislation

The legislation passed by the Commonwealth Parliament between 1901 and 1973, and which was then still in operation, was 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 between 1901 and 1973 in relation to the several provisions of the Australian Constitution. Reference should be made to these for complete information.

In 1989 the number of enactments of the Commonwealth Parliament was 183.

National Anthem and Colours of Australia

Details of the official proclamation issued on 19 April 1984 are 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.

3

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 dependent on trade; it is geographically remote 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.

While links with the United States, Britain and 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 North Asia, South-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 cooperative 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 cooperation in the development process. Australia gives special attention to its relations with China, Japan, the member countries of ASEAN (the Association of South-East Asian Nations), New Zealand, Papua New Guinea and the other South Pacific states.

International issues including economic cooperation, disarmament, trade access, human rights, refugees, 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 need to maintain the 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 time to come. Australia places a high priority on its participation in the resolution of these global issues not only in the United Nations and other multilateral forums, but also in the regional context through multilateral bodies such as Asia-Pacific Economic Cooperation (APEC).

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, 1973–74 and 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 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), the Food and Agriculture Organisation (FAO), the World Food Program (WFP), and the UN Development Program (UNDP). Australia also participates in regional consideration of social and economic issues in the Economic and Social Commission for Asia and the Pacific (ESCAP), the United Nations' regional body. In 1989 Australia was re-elected for a further four-year term on the Commission on Narcotic Drugs. It is on the Governing Council of the UN Environment Program (UNEP) and is a long-standing member of the Governing Body of the International Labour Organisation (ILO). 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 been a major contributor to UN peacekeeping operations since these began. Australia contributes its assessed share of the costs of UN budgets (1.57 per cent), and similar percentages to all other UN bodies of which it is a member. In addition it makes voluntary contributions as well as providing personnel and equipment for peacekeeping forces. At present Australia provides personnel for the UN Forces in Cyprus, the UN Truce Supervision Organisation and the UN Iran/Iraq Military Observer Group.

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 continues to play an active role in the UN Commission on Human Rights and fully participates in the work of other UN bodies dealing with the implementation of international human rights conventions. Australia was re-elected to the Commission on Human Rights in 1990 for a three-year term beginning in January 1991.

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 which brings 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. The last Commonwealth Heads of Government Meeting (CHOGM) was held in Kuala Lumpur, Malaysia in October 1989.

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, economic and trade consultations, commercial, cultural and defence ties and wide-ranging personal contacts. There are regular Ministerial visits in both directions. Two-way trade between ASEAN and Australia is growing rapidly and now represents eight per cent of Australia's total trade with the world.

Australia maintained its regular dialogue with the ASEAN grouping. The Foreign Affairs and Trade Minister attended the Post Ministerial Conference following the annual ASEAN Ministerial Meeting in Brunei in July 1989. Agreement was reached on a number of mutually beneficial development projects under the ASEAN Australian Economic Cooperation Program (AAECP), including a three year Trade and Investment Promotion program.

Indonesia is Australia's closest regional neighbour and straddles major sea and air routes. Australia is committed to the maintenance of sound and productive relations with Indonesia at all levels. Accordingly, Australia has pursued an active relationship with Indonesia in the areas of trade, investment, science, defence and culture. Australian aid to Indonesia is expected to continue at levels of around $100 million per year. Efforts to add further substance to the relationship through building on concrete areas of mutual interest have resulted in close cooperation on international economic issues as well as the development of a more substantial bilateral trade and commercial relationship, the signing of the Timor Zone of Cooperation Treaty and the establishment of an Australia–Indonesia Institute.

Australia and Thailand share a range of political, strategic and economic interests. Thailand's impressive progress towards industrialisation and its success in international markets, indicate that it will become more important to Australia as a trading and investment partner. Cooperation in multilateral trade matters through the Cairns Group is also an important aspect of the relationship. Australia's relationship with Thailand is given added substance through development assistance activities, defence cooperation, tourism and cooperation in narcotics control.

Malaysia and Australia have a long history of close and constructive relations, covering the full range of political, commercial and social links. Education links are particularly strong and have contributed significantly to continuing personal contacts between people, business, academic and government circles. Malaysia and Australia cooperate closely on international trade issues. Cooperation in defence is long-standing. The relationship has adapted well to the political and economic changes within the region.

Australia has a tradition of close interest in and association with Singapore. Relations are broadly based, encompassing the whole range of bilateral areas including trade and investment, defence, education, civil aviation, tourism and cultural relations. The investment links that Australia and Singapore share have contributed to the frequency of exchanges between political leaders and officials of the two countries.

The Philippines is important to Australia because of its strategic location and close cooperation on a range of matters of mutual interest. Australia has a substantial development assistance program with the Philippines, and there are important linkages through trade, migration and tourism.

Relations between Brunei and Australia are developing steadily, especially in the fields of trade, defence and education. There is also a growing dialogue on regional trade and strategic issues.

Relations with Myanmar slowed significantly after the brutal suppression of the pro-democracy movement in that country in 1988. Aid, trade and other contacts still remain at low levels.

Australia is concerned by the destabilising effects on the South–East Asian region posed by the situation in Cambodia. Australia's policy has been to promote dialogue among the parties to the conflict in order to achieve a comprehensive political settlement. Australia has proposed that in the transitional period leading to elections, the United Nations has a role in civil administration, in providing security and in organising and conducting elections, so that Cambodians will be able to determine their future without fear of coercion.

Australia is also developing a more broad-based relationship with Vietnam through increased trade, visits and cultural exchanges. Bilateral aid remains suspended pending resolution of the Cambodian conflict, but humanitarian aid is given indirectly through multilateral and non-government organisations. Australia is also developing relations with Laos, principally through development assistance, the main element of which is a commitment to build a bridge across the Mekong near Vientiane.

Japan

Japan remains Australia's largest trading partner, with total two-way trade in 1989 totalling $23 billion. Minerals and energy and rural products continue to dominate Australia's exports to Japan, but manufactures exports are now approaching 20 per cent of the total and the services trade, principally tourism, has become significant. Japan is now Australia's primary source of foreign investment funds. As suggested by the Constructive Partnership agreed at the 1989 Australia–Japan Ministerial Committee meeting, relations have broadened significantly beyond traditional trade and economic ties. Dialogue on a range of regional and international political and economic issues is now an established part of the bilateral relationship.

China

Australia's relations with China remain downgraded following the violent repression of the democracy movement in June 1989 and subsequent developments. Government policy statements of 13 July 1989 and 23 January 1990 emphasised that Australian policy is based on a complex balance of considerations—taking into account such factors as the need to keep open lines of access and communication, and to protect Australia's long-term strategic and commercial interests, as well as fundamental human rights principles. Bilateral trade in 1989 exceeded $2.4 billion, with much of the annual increase taken up by a strong growth of Chinese imports to Australia. A number of the Joint Working Groups covering specific areas of economic cooperation continued to meet in 1990.

Hong Kong

With two-way trade of $2.6 billion, Hong Kong is Australia's third largest Asian export market. Hong Kong is also an important source of migration, tourism and investment, as well as a major target for export of education services. The visit in June 1990 by the Minister for Foreign Affairs and Trade reflects Hong Kong's importance to Australia.

Taiwan

While Australia has no official links with Taiwan, there is a growing commercial relationship. Two-way trade in 1989 was valued at $3.8 billion and Taiwan is now Australia's sixth largest export market.

Republic of Korea

Korea's relative importance to Australia has grown quickly in recent years reflecting a rapidly increasing level of bilateral trade. Korea was Australia's third largest export market in 1989. Total bilateral trade now stands at $3.8 billion per annum. Significant expansion of cultural and political links has also occurred in the last few years. High level visits have included President Roh's visit in November 1988 and a reciprocal visit by Prime Minister Hawke in January 1989. The Minister for Foreign Affairs and Trade visited Seoul in June 1990.

South Pacific

Australia is a member of the South Pacific Forum, the Forum Secretariat (formerly SPEC—the South Pacific Bureau for Economic Cooperation), the Forum Fisheries Agency (FFA), the South Pacific Commission (SPC) and the South Pacific Applied Geoscience Commission (SOPAC). Australia actively participates in meetings of these organisations and provides significant financial support to them and to other regional and international programs providing assistance to the South Pacific region. To assist in the preservation and development of indigenous Pacific cultures, Australia has established the South Pacific Cultures Fund. Australia and New Zealand have entered into a non-reciprocal preferential trade agreement in favour of the South Pacific Forum States, the South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA). The Prime Minister, Mr Hawke, represented Australia at the 20th South Pacific Forum held in Tarawa, Kiribati, in July 1989. Australia is a party to the South Pacific Nuclear Free Zone Treaty (the Treaty of Rarotonga) and has ratified the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (SPREP) on 19 July 1989. Australia has also signed the Wellington Convention on the Prohibition of Driftnet Fishing in the South Pacific.

Relations between Australia and New Zealand reflect their shared history, similarities in political and social structure and the importance of the economic links. While Australia and New Zealand still have some differences of view in the defence policy area, specifically in relation to ANZUS, other aspects of the relationship have continued to expand. This has been exemplified in the 1988 Review of the Closer Economic Relations Trade Agreement (ANZCERTA) which provided for free trade in goods from 1 July 1990, the extension of CER into trade in services and increased harmonisation of the commercial environment. The encouragement of political and cultural exchanges through the Australia New Zealand Foundation reflects another dimension in the close relationship. Australia and New Zealand also often work closely in their approaches to the international political and economic environment.

Papua New Guinea

Australia and Papua New Guinea (PNG) enjoy a close bilateral relationship based on historical ties and mutual political, strategic and economic interests. The relationship encompasses a broad range of government and non-government activities. Australia has significant trade and investment interests in PNG. In 1989, Australian exports were worth $807 million, and the total level of investment was about $1.8 billion.

PNG is the single largest recipient of Australian aid, receiving $275 million in budget support and $30 million in project aid in 1990–91. The Treaty on Development Cooperation was signed in May 1989, establishing the principles, levels and forms of aid to PNG over the next five years, and reflecting Australia's long-standing commitment to contribute to PNG's development and self-reliance.

The Joint Declaration of Principles (JDP), which provides the framework for the conduct of the bilateral relationship between Australia and PNG, was signed on 7 December 1987 by Prime Ministers Hawke and Wingti. The JDP reaffirms the commitment of both Governments to the maintenance and strengthening of close and friendly relations between our two countries, in accordance with the principles of mutual respect for one another's independence, sovereignty and equality, and on the basis of consultation, reciprocity and mutual benefit.

Activities covered by the JDP include cooperation in defence; trade and investment; financial; transport and other services; development assistance; communications and travel; border administration; legal areas and people-to-people exchanges.

Within the JDP framework, a Ministerial Forum is held to facilitate discussions on the PNG–Australia relationship at ministerial level. The second Forum took place in Port Moresby in January 1990, and was attended by the Minister for Foreign Affairs, Senator Evans, the Minister for Defence, Mr Beazley, the Minister for Justice, Senator Tate, and the Minister for Primary Industries and Energy, Senator Cook. The Papua New Guinea–Australia Trade and Commercial Relations Agreement (PATCRA) was reviewed in 1989 and the revised agreement initialled at the Forum. Negotiations have also concluded at official level on an Investment Protection and Promotion Agreement (IPPA).

The Torres Strait Treaty between Australia and PNG entered into force in February 1985. The Treaty defines the maritime boundaries between PNG and Australia and sets down provisions to:

- protect the traditional way of life of inhabitants from both sides of the border;
- protect the environment;
- ensure freedom of navigation and overflight; and
- regulate the exploitation of resources.

The Americas

Australia has a long-standing relationship with the United States which extends across the whole range of national life. Government-to-government relations are one part of a larger and more extensive interaction between the two societies with interlinked culture and language. Relations between the countries are warm and cooperative, with a high degree of official consultation and generally close personal relations between the leaders. The affinity is underpinned by substantial economic and commercial relations although perspectives can and do differ on aspects of trade policy.

Australia's defence links with the United States under ANZUS serve the vital interests of both countries by contributing to regional security and the maintenance of global stability.

Canada is a country comparable with Australia in terms of institutions and traditions, geographical size, and international outlook. This has allowed a close degree of cooperation and interchange of ideas between the two countries. Australia takes an increasing interest in developments in Latin America and the Caribbean.

Recent political and economic developments in Latin America, including an increasing focus towards the Asia–Pacific region and constructive cooperation on multilateral trade and Antarctic issues, are fostering closer relations between Australia and many Latin American countries.

Europe

Australia seeks to maintain constructive and profitable relations with the countries of Western Europe, with the European Community (EC) and its institutions, including the European Parliament.

Bilateral relations with the individual Western European countries continue to be of considerable importance. These relations exist as a result of the very close historical, social and cultural links with these countries, and were developed through extensive trade and investment links. Economic ties are, however, constrained by the EC's continued adherence to agricultural protectionism.

The EC is an important trading partner and our most important 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 mutual advantage, and has secured EC agreement to a collaborative work program in science and technology, business links, the environment and to regular contacts at a senior level on foreign policy questions.

Over the past year revolutionary changes have swept through Eastern Europe. Australia has an interest in encouraging the trend in these countries towards democratic processes of government and market oriented economies. Elections held throughout Eastern Europe have been free and fair and the newly elected governments have generally shown a desire to respect the basic human rights of their people.

While the pace of democratic change will obviously vary from country to country, these changes will result in a reorientation both politically and economically away from the previous political and trading relationships of the Warsaw Pact and the Council for Mutual Economic Assistance.

Australia has been active in providing practical assistance to Eastern Europe through the Group of 24 OECD member countries. Australian initiatives have included:

- the decision to join the European Bank for Reconstruction and Development as a founding member (with a shareholding of one per cent);
- the establishment of the Australian Program of Training for East Europe;
- the negotiation of Double Tax and Investment Protection Agreements with Poland, Hungary and Czechoslovakia; and
- the provision of $5 million worth of wheat to Poland and the contribution of US$1 million to the Stabilisation Fund for Poland.

There are 500,000 Australians who trace their origins to Eastern Europe and many of them have retained their language skills. This should provide a sound base from which to extend Australia's contacts with Eastern Europe in trade, investment and tourism.

Australia's trade with Eastern Europe is led by sales of wool and other commodities. While Eastern Europe will remain a significant market for Australia, the transition away from central planning could create dislocations in these countries' economies which may, in the short term, affect their ability to pay for high levels of imports.

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 negotiations of differences in the region, e.g. in such areas of conflict as the Arab–Israeli dispute and the problems facing Lebanon. Australia supported the Camp David accords and the peace treaty between Israel and Egypt, seeing them as a first step towards a just, lasting and comprehensive settlement of the Arab–Israeli 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. Australia maintained a strict policy of neutrality in the Iran–Iraq war, and welcomes the achievement (under UN auspices) of a ceasefire between Iran and Iraq. Australia responded positively to a request from the United Nations to contribute to the United Nations Iran–Iraq Military Observer Group. Fifteen Australian officers have been assigned to the group and are serving in Iran.

Africa

Australia maintains a broad range of contacts with independent black African States, and is closely concerned with developmental and humanitarian issues affecting Africa. Its strong and continuing opposition to racial discrimination and the apartheid system is reflected by its adherence to the Commonwealth statement on Apartheid in Sport (the Gleneagles Declaration), its adoption of all measures against South Africa agreed by Commonwealth Heads of Government at Nassau (1985) and London (1986) and its active role in encouraging peaceful change in South Africa, including through its participation in the Commonwealth Committee of Foreign Ministers on Southern Africa and its financial sanctions initiative agreed to by Commonwealth Heads of Government at Kuala Lumpur (1989). Australia has welcomed the steps taken since February 1990 by the South African Government to normalise the political situation in South Africa and initiate talks with representative black leaders, but sees no immediate reason to contemplate an early relaxation of existing sanctions and pressures. Australia maintains correct but cool diplomatic relations with South Africa. Australia supported international action to bring

Namibia to independence by negotiated settlement in accordance with United Nations Security Council Resolution 435 and provided military and civil support to the United Nations Transition Assistance Group during the transition process.

Australian aid to Africa is focussed on Eastern and Southern Africa. This includes assistance given through the Southern African Development Coordination Conference as well as humanitarian assistance for the reintegration and development of South Africans and Namibians disadvantaged by apartheid. Food aid constitutes the dominant share of Australian aid to Africa because of growing food deficits and the continuing famine crisis in Ethiopia and Mozambique.

Indian Ocean

Australia, as an Indian Ocean littoral state with wide interests in the region, is committed to the development of the concept of an Indian Ocean Zone of Peace (IOZP). For many years Australia has played an active and constructive role in the United Nations Ad Hoc Committee on the Indian Ocean. The Ad Hoc Committee has so far not succeeded in its attempt to convene an international conference on the Indian Ocean to develop the IOZP concept. The Minister for Foreign Affairs and Trade, Senator Gareth Evans, in an address at Murdoch University on 9 March 1990 expressed the hope that the thaw in East–West relations will act to break the logjam and give fresh impetus to the negotiations. Australia maintains a modest aid program to Mauritius and other smaller Indian Ocean states.

ANZUS

Following a review in 1983 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 Government reaffirmed the alliance 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 then Department of External Affairs. In 1984, the New Zealand Government implemented a policy not to permit the entry to New Zealand of nuclear powered warships or of warships (or aircraft) which might carry nuclear weapons. Consequently the United States, at the Australia–United States ministerial talks in August 1986, formally suspended its security obligations to New Zealand under the ANZUS Treaty pending adequate corrective measures. Both the United States and Australia agreed that the relationship between the United States and Australia under the ANZUS Treaty and the rights and obligations assumed by the United States and Australia towards each other under the Treaty would remain constant and undiminished. ANZUS continues to govern the bilateral defence relationship between Australia and the United States, and that between Australia and New Zealand.

Nuclear issues

Australia's strong commitment to effective nuclear disarmament and arms control is reflected in its support for the international non-proliferation regime. Australia ratified the Nuclear Non-Proliferation Treaty (NPT) in 1973 and encourages universal adherence to it.

Australia is a member of the International Atomic Energy Agency (IAEA) and provides political and financial support to the IAEA. Australia's active participation in the IAEA, including contributions to the IAEA regular budget and to the Technical Assistance and Cooperation Fund, helps the Agency to continue to function in an effective and efficient manner. Australia has a particular interest in the continued effectiveness of the international nuclear safeguards system.

The stringent nuclear safeguard conditions applied to exports and subsequent use of Australian uranium are set out as binding international legal obligations in the bilateral nuclear safeguards agreements which customer countries must enter into before any uranium exports from Australia are permitted. These conditions include an undertaking not to use Australian-obligated nuclear material for any military or explosive purpose, and the acceptance of IAEA safeguards in order to verify that undertaking. Australia has concluded fifteen bilateral nuclear safeguards agreements covering twenty-three countries and two international bodies.

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. 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 South Pacific Forum which resulted in the conclusion of the South Pacific Nuclear Free Zone Treaty, its adoption in the South Pacific Forum in 1989 and its endorsement by the UN General Assembly in 1989. Australia also accords priority to a number of non-nuclear disarmament questions. It is committed to the early conclusion of a fully effective and verifiable Chemical Weapons Convention which would ban the production, trade in and use of chemical weapons and require the destruction of existing stockpiles. Australia has supported the negotiations for a Convention in Geneva through a number of initiatives. In September 1989 Australia hosted an international Government–Industry Conference Against Chemical Weapons which obtained industry support for a Convention and following this, Australia assisted in organising a meeting of industry with the Conference on Disarmament's Chemical Weapons Committee to convey to the Committee their views on issues of concern to industry. Australia has established a National Secretariat to prepare for the implementation of the Convention in Australia and has been active in developing an awareness of and support for the Convention in countries of the region. In 1990 Australia was responsible at Geneva for coordinating the approach to issues of the Western group of countries.

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 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.

Trade relations

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 early 1980s 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 trends towards increased protectionism and to encourage freer trade through active participation in forums such as the General Agreement on Tariffs and Trade (GATT). GATT is the principal multilateral institution for the 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, and is playing an active role in the Uruguay Round of Multilateral Trade Negotiations taking place under GATT auspices, and scheduled to end in December 1990.

In particular, Australia initiated the formation of the 14 member Cairns Group of Fair Traders in Agriculture, which has established itself as an effective proponent of reform in international agricultural trade.

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.

The last two decades have seen the economies of the Asia-Pacific region (in this case taken as the Western Pacific Region plus North America) emerge as the fastest growing in the world. The region accounts for over half of the world's economic output and more than one-third of world trade. While the region's growth prospects are favourable they are subject to some uncertainty, partly reflecting regional developments and partly broader trends in the international economy. It was against this background of dynamic regional growth that the Prime Minister launched the Australian initiative for APEC in Seoul in January 1989.

The initiative reflected Australia's major stake in regional economic developments. The extent of Australia's economic integration will be critical to Australia's economic future. The region already accounts for almost 71 per cent of our merchandise exports and 66 per cent of our merchandise imports. Australia's primary objective in greater regional economic cooperation is to enhance the prospects for sustained regional economic growth and development. The Prime Minister suggested a number of ways this could be achieved:

- by improving the prospects of success for multilateral trade liberalisation in the Uruguay Round negotiations and beyond;
- by discussing openly obstacles to trade and investment in the region and the possibilities for non-discriminatory trade liberalisation; and
- by identifying specific areas for cooperation.

The initial Ministerial-level Meeting was held in Canberra on 6–7 November 1989 and was attended by 26 Ministers from the 12 participants (Australia, Brunei Darussalam, Canada, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand and the USA). The meeting was successful in that it effectively launched an ongoing process of cooperation that will benefit all Asia Pacific economies. Following the meeting work began on a series of projects covering a range of issues such as human resources development, trade and investment data, energy, and marine resources conservation. At their second meeting (in Singapore in July 1990), Ministers reviewed the development of the work projects, discussed developments in the international economy and issues affecting the regional economy and stressed the importance of a successful outcome to the current Uruguay Round of negotiations to the multilateral trading system.

Australia maintains its commitment to accelerating the economic development of Developing Countries (DCs). To this end, Australia extends preferential import treatment to DCs for all dutiable goods. Other concessions also apply to handicraft type goods which meet certain criteria regarding content, character and method of manufacture.

Because of its 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 relations with a large number of countries. Australia's international airline, Qantas, has a well-established network linking Australia with Asia, Oceania, North America, Europe and Africa. Shipping is also of major importance and the maintenance of Australia's interests in the shipping and aviation fields requires a conducive atmosphere in both bilateral and multilateral negotiations.

Australia attaches great importance to its traditional relations with other developed countries, which continue to be Australia's principal trading partners. Membership of the OECD has enabled 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. Of particular relevance to Australia's regional trade and economic relations, the OECD has been developing closer contact with the Dynamic Asian Economies (DAEs—South Korea, Taiwan, Hong Kong and Singapore). At the 1990 OECD Ministerial Council Meeting, Australia was active in ensuring that Ministers focussed on the central role of agricultural reform in the Uruguay Round negotiations. While the meeting failed to arrive at agreed communique language on the approach to be taken to agricultural reform, the fact that disagreements were forced into the open should serve to underline to GATT negotiators the urgent need to resolve these issues if the Uruguay Round is to be successful. The OECD's work on relations with developing countries is also relevant to Australian interests and on the environment, the Organisation recognises the importance of integrating environment and economic decision-making and provides a forum for the discussion of the means of contributing to sustainable development.

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 UN Convention on the Law of the Sea 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 recognised. 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 (ATCM) in Canberra in 1961. Such meetings are held about every two years in one of the Consultative Party States. Australia was last the host in 1983 for the twelfth meeting. The fifteenth ATCM was held in Paris from 9 to 20 October 1989. There are now 39 Governments which are parties to the Antarctic Treaty. Of these 25 are the Consultative Parties entitled to participate fully in Consultative Meetings.

Hobart is host to the Commission for the Conservation of Antarctic Marine Living Resources established by a Convention adopted in Canberra in 1980. The Commission and its Scientific Committee meet annually. The Commission is the only international organisation based in Australia.

On 22 May 1989 the Australian Government announced that it will not sign the Convention on the Regulation of Antarctic Mineral Resource Activities adopted at Wellington on 2 June 1988. Instead it is pursuing the negotiation of a comprehensive environmental protection regime within the framework of the Antarctic Treaty. On 18 August 1989 the Australian and French Prime Minsters announced that Australia and France would pursue their initiative jointly. The fifteenth ATCM agreed to a Special Consultative Meeting on the environment which will be held in Santiago de Chile in November 1990. The detailed terms of reference for this meeting ensure that the Australian–French proposal for a "Nature Reserve—Land of Science" will be fully considered.

Treaties

The texts of bilateral and multilateral treaties to which Australia is a party are printed in the Australian Treaty Series (ATS) when they enter into force. The Australian Treaty List to 31 December 1989 was published in 1990 as ATS 1989 No.38 and will be supplemented by subsequent annual volumes of Treaty Action (No.1 of ATS each year). Monthly updates are contained in the Department of Foreign Affairs and Trade publication 'Backgrounder'.

Australia's current position in regard to individual treaties may be ascertained by referring to the 1990 List 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'. The foregoing publications are available from Commonwealth Government Bookshops, except 'Backgrounder' which is available from the Department of Foreign Affairs and Trade, Canberra.

Cultural relations

The Department of Foreign Affairs and Trade administers a program of cultural relations overseas. This program supports Australian foreign policy and economic objectives through cultural activities and exchanges. These include tours overseas of all types of performing and visual arts, promotion of Australian literature and literary studies, promotion of general Australian studies, cultural assistance, visitor exchange, book gifts, and sporting gifts and exchanges. Formal priorities have been established for the program, with major emphasis on South-East Asia, the South Pacific, North and East Asia, South Asia and Indian Ocean countries. There are also continuing programs in the United States of America and in the USSR.

The Department collaborates closely with other departments, institutions and agencies in the development of its program. The Department seeks to build up programs which will increase understanding and comprehension overseas of Australian society and culture, and thus help foster a favourable environment for the promotion of foreign policy goals. At the same time it seeks to promote professional opportunities for Australian practitioners in all cultural and sporting fields.

The Department also provides secretariats for the Australia China Council, the Australia Japan Foundation, the Australia New Zealand Foundation and for the Australia Indonesia

Institute, which the Government established in 1989. The secretariats form part of the Cultural Relations Branch.

Australian Foreign Aid Program

The objective of the Australian Aid program is to promote the economic and social advancement of the peoples of developing countries, in response to Australia's humanitarian concerns as well as Australia's foreign policy and commercial interests. In pursuing this objective the program focuses on the surrounding Pacific and South-East Asia regions. A major aim of Australian development cooperation in the 1990s is to assist developing countries to achieve a growth path that is environmentally sustainable and brings benefits to the poor.

In 1990–91 Australia will provide around $1,266.8 million as official development assistance (ODA). This represents an increase of $19.6 million or 1.6 per cent in real terms on 1989–90 expenditure. This level of expenditure is expected to yield an ODA/GNP ratio of 0.33 per cent, the same as in 1989–90.

The Australian aid program is divided into three divisions: Country Programs; Global Programs and Corporate Services. The implementation of most of Australia's aid is carried out on a country program basis. These programs are designed to promote sustainable development in developing countries. They assist governments and regional organisations to plan and implement programs and activities designed to improve economic and social conditions. In 1990–91 $734.5 million will be provided through Country Programs.

Through Global Programs Australia contributes to development activities not planned on a country-by-country basis. Activities supported include emergency relief, assistance for refugees, agricultural research, activities undertaken by Australian non-government organisation, the Development Import Finance Facility (DIFF), development education and public information, as well as contributions to international development organisations. In 1990–91 $453.8 million has been allocated to Global Programs.

The aid program is administered by the Australian International Development Assistance Bureau (AIDAB). Corporate Services, which represents the costs of administering the program, will total $30.9 million in 1990–91. In addition, a further $47.5 million will be spent by other government departments on activities classified as ODA.

Country Programs

The Australian Government currently provides development assistance directly to over 90 countries. However, in line with Australia's geopolitical and economic interests, emphasis is placed on providing support to nearby countries in the South Pacific and South-East Asia regions.

Most development assistance activities are programmed on a country basis. Country programs draw together all the instruments of aid delivery available to a particular country. Areas of focus and a program of activities are developed in consultation with each recipient government, with the aim being to provide forms of aid that best match a country's needs with Australia's comparative advantage.

In financial terms, the most important forms of development cooperation are project aid, education and training, DIFF and food aid.

Projects supported by Australia range from large scale, long-term, integrated regional development programs to small scale village level projects. Most projects involve assistance to develop the recipient country's physical capital (e.g. bridge construction in Indonesia), and the provision of technical cooperation to enhance local expertise (e.g. forestry assistance in Nepal and curriculum development in Solomon Islands).

Australia's education and training program is designed to assist countries to develop the human skills needed for their economic and social advancement. Governments are encouraged to identify education requirements and staffing needs which relate to their national development priorities in areas where Australia can offer relevant expertise and which complement other Australian development cooperation activities. The majority of education and training activities occur within Australia, though some assistance is provided in developing countries themselves. In 1989–90 an estimated $130 million was contributed towards the education of developing country students.

TOTAL AUSTRALIAN AID FLOWS TO MAJOR RECIPIENTS 1989–90

Country	*$ million*
Papua New Guinea	337.8
Indonesia	98.0
Thailand	46.6
China	42.7
Bangladesh	36.1
Malaysia	35.2
Philippines	30.2
India	28.9
Fiji	25.3
Vietnam	16.8
Ethiopa	14.8
Egypt	13.8
Solomon Islands	13.3
Zimbabwe	13.2
Mozambique	12.8
Vanuatu	12.4
Pakistan	10.5
Tonga	10.4
Western Samoa	10.2
Tanzania	9.2

Australia is one of the world's largest providers of food assistance to developing countries. In terms of grain, Australia budgets for a minimum of 300,000 tonnes of wheat or its equivalent each year as food aid to developing countries. Other foods include flour, high protein biscuits, skim milk powder and edible oils. Around 80 per cent of Australia's food aid is provided to assist in the achievement of long term developmental goals. About 40 per cent of that developmental food aid is provided on a direct government-to-government basis. It is provided where food is a high priority need. The remaining developmental food aid is provided through the World Food Program (WFP), a UN agency which channels food resources to food deficit developing countries in support of development projects in rural areas. Australia provides 20 per cent of its total food aid for emergency relief and refugee programs. In 1990–91 Australia will provide approximately $27.8 million in bilateral development food aid, $44 million worth of food for development through the WFP and $24.3 million as relief food aid.

Papua New Guinea and South Pacific

Papua New Guinea (PNG) continues to be Australia's largest aid recipient with an allocation of $322.5 million in 1990–91, about one quarter of the Australian aid program. Most of this allocation is in the form of untied budget support. The Australian and PNG Governments have agreed that the overall level of Australian development assistance should reduce progressively and that there should be a gradual shift from budget support to assistance for individual activities. Under the current program, budget support will be maintained at the present level of $275 million until 1993–94, when it will be reduced to $260 million. Over the same period programmed activities will be expanded from $23 million in 1989–90 to $30 million annually from 1990–91 to 1992–93. They will increase further to $35 million in 1993–94.

In 1990–91 Australian development cooperation activities in the South Pacific will be undertaken with Fiji, Solomon Islands, Western Samoa, Vanuatu, Tonga, Kiribati, Tuvalu, Cook Islands, Niue, Tokelau, Palau, the Marshall Islands, New Caledonia and the Federated States of Micronesia.

Cooperation through regional organisations is directed towards sectors which are best coordinated on a regional basis, as well as those activities focusing on regional economic and trade issues. This effectively complements Australia's government-to-government assistance. In addition, activities which are relevant to more than one country, or which are more economically viable on a larger scale, are supported on a multicountry basis. The major continuing focus of multicountry activities will be on the health sector. In 1990–91, Australian development cooperation with the South Pacific (excluding PNG) will total $88.5 million.

South–East Asia

Australia provides a broad range of forms of assistance to the region, including project aid, training assistance for students and the DIFF. A total of $160 million has been allocated in 1990–91 for development cooperation activities in the region.

Indonesia, with an allocation of $51.3 million, is the largest recipient of assistance through country programs in the region. Other major recipients include the Philippines ($35 million), Thailand ($24.5 million) and Laos ($8.7 million).

Support is also provided for regional organisations and programs, such as the ASEAN Australia Economic Cooperation Program (AAECP).

Other regions

Australian assistance to other regions of the world is concentrated on specific economic and social sectors in which Australia has particular expertise. Development cooperation with these countries through country programs will total $89.9 million in 1990–91.

The largest allocation for a group of countries is that for Southern Africa, where $30.8 million has been allocated in 1990–91. This represents the first year of a new $110 million program to Southern Africa. Recipients are the ten member states of SADCC, the Southern Africa Development Coordination Conference (Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland, Tanzania, Zambia and Zimbabwe), and the SADCC organisation itself. Funds are also provided for regional activities. The program for Southern Africa incorporates the Special Assistance Program for South Africans and Namibians (SAPSAN).

Other countries benefiting from Australian development cooperation in 1990–91 include those in South Asia ($22m), China ($16.5 million), North Africa and the Middle East ($10.5 million).

International development organisations and programs

Australia supports a range of key international financial and development institutions. These organisations can participate in development cooperation on a scale, and in sectors, beyond the capacity of a single donor. Australia's active participation in these agencies enables it to have a policy influence on each institution's activities and to utilise their expertise in formulating Australia's own development cooperation strategies and programs. Support for multilateral agencies also allows Australia to provide assistance in areas outside its sphere of technical expertise, comparative advantage or access.

In 1990–91 Australia will make voluntary contributions of about $266.1 million to international organisations. This includes about $69.6 million to key development agencies of the UN system, such as the UN Development Programme (UNDP), the UN Children's Emergency Fund (UNICEF), and WFP. International financial institutions such as the World Bank and the Asian Development Bank have been allocated $170.8 million. The activities of Commonwealth programs, some specialist international non-government agencies and development and research institutions will also be supported.

Emergencies and refugees

Australia provides assistance in cash and kind for refugees and victims of emergencies and natural disasters in developing countries to help alleviate suffering, as well as to promote equitable and longer term solutions to refugee problems. The channelling of the emergency aid is through a variety of agencies depending on the location and nature of each emergency. In 1990–91, $57.2 million will be provided for Australian responses to emergency, disaster and refugee situations. Assistance may include food aid, temporary shelter materials, medical supplies and accountable cash grants. Australia also supports the general programs of a number of organisations by making contributions to their core budgets. These include the UN High Commissioner for Refugees (UNHCR), the UN Relief and Works Agency (UNRWA) and the International Committee of the Red Cross (ICRC). Australia also provides assistance for disaster preparedness and mitigation measures, especially in the South Pacific.

Community and commercial programs

The Australian public has consistently demonstrated its concern about poverty in the developing world. The Government provides funds to subsidise the development projects and relief activities of non-government organisations. These agencies provide development and emergency assistance from funds raised directly in the community, on a much larger scale than the subsidies they receive from the Government. They undertake a range of development projects, development education and volunteer programs. A total of about $15 million has been allocated to voluntary agencies in 1990–91.

The direct participation of the academic and research community in the program is also encouraged and $27.2 million has been allocated to these activities.

In line with the objectives of the Australian aid program, Australian commercial interests are advanced through a range of commercial activities.

The Commodities Assistance Program (CASP) involves the provision of Australian manufactured goods to developing countries in the South Pacific, Southern Africa and Indian Ocean regions. Under this program commodities are purchased for the recipient government to use in development activities or for resale to raise funds for the implementation of development activities.

Australia's mixed credit scheme, the DIFF, provides opportunities for Australian business to supply developmentally important goods and services. Mixed credits combine grant aid funds with commercial export credits to provide 'soft finance'. Since its introduction in 1980, DIFF has committed support to 44 projects in 12 countries. This has involved DIFF payments and future commitments of $340 million, and supported total export contracts for Australia of over $1 billion. In 1990–91 the allocation for DIFF of almost $84 million will provide support for an estimated 18 projects in nine developing countries.

Consular services and passports

The Department is responsible to the Minister for Foreign Affairs and Trade 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.

In 1989 the service was expanded in two ways through arrangements with Canada and the inauguration of a pilot program for Honorary Consuls.

The Australia Canada Consular Sharing Agreement, signed in 1986, was extended to a larger range of countries. The agreement enables Australian citizens to obtain consular assistance from Canadian diplomatic and consular posts in certain countries where Australia has no representation. The countries where Canada now provides consular services to

Australians are Norway, Tunisia, Peru, Ivory Coast, Ghana, Ethiopia, Guinea, Tanzania, Senegal, Zaire, Gabon, Morocco and Cameroon.

The appointments of Honorary Consuls, the first appointed by the Australian Government, have so far been made at the following locations: Lae, Managua, Barcelona, Bogota, Sao Paulo, Boston and Papeete.

In 1989, 931,000 passports were issued and about 68 per cent of all applications were lodged through Australia Post. The passport telephone enquiry service provides country and city residents with equal cost telephone access. The service also responds to callers when there is an emergency overseas which might involve Australians. The service answers about 370,000 calls a year.

To maintain security in the passport processing system, adult applicants must attend an interview before they may obtain a passport valid for ten years. Applicants who are unable to attend an interview may be issued with a temporary passport valid for twelve months.

Australian Representation Overseas

As at 30 June 1990, Australia maintained the following diplomatic and consular representation overseas (full details of these missions are available from the Department of Foreign Affairs and Trade, Canberra, ACT, 2600).

Country	*Post*	*Country*	*Post*
Algeria	Algiers	Micronesia, Federated States of	Pohnpei
Argentina	Buenos Aires	Myanmar (Burma)	Yangon
Austria	Vienna	Nauru	Nauru
Bangladesh	Dhaka	Nepal	Kathmandu
Belgium	Brussels	Netherlands	The Hague
Brazil	Brasilia	New Zealand	Wellington
Brunei	Bandar Seri Bagawan	Nigeria	Lagos
Canada	Ottawa	Pakistan	Islamabad
Chile	Santiago	Papua New Guinea	Port Moresby
China	Beijing	Philippines	Manila
	Shanghai*	Poland	Warsaw
Cyprus	Nicosia	Portugal	Lisbon
Czechoslovakia	Prague	Saudi Arabia	Riyadh
Denmark	Copenhagen	Singapore	Singapore
Egypt	Cairo	Solomon Islands	Honiara
Federal Republic of Germany	Bonn	South Africa	Pretoria
Fiji	Suva	Spain	Madrid
France	Paris	Sri Lanka	Colombo
New Caledonia	Noumea*	Sweden	Stockholm
Greece	Athens	Switzerland	Berne
Hong Kong	Hong Kong*	Syria	Damascus
Hungary	Budapest	Thailand	Bangkok
India	New Delhi	Tonga	Nuku'alofa
	Bombay*	Turkey	Ankara
Indonesia	Jakarta	United Kingdom	London
	Bali**	United States	Washington
Iran	Tehran		Chicago*
Iraq	Baghdad		Honolulu*
Ireland	Dublin		Houston*
Israel	Tel Aviv		Los Angeles*
Italy	Rome		New York*
Jamaica	Kingston		San Francisco*
Japan	Tokyo	USSR	Moscow
Jordan	Amman	Vanuatu	Port Vila
Kenya	Nairobi	Vatican	Holy See
Kiribati	Tarawa	Venezuela	Caracas
Korea, Republic of	Seoul	Vietnam	Hanoi
Laos	Vientiane	Western Samoa	Apia
Malaysia	Kuala Lumpur	Yugoslavia	Belgrade
Malta	Malta	Zambia	Lusaka
Mauritius	Port Louis	Zimbabwe	Harare
Mexico	Mexico City		

Australia also maintained five separate permanent missions in:

New York—UN
Geneva—UN
Geneva—Disarmament
Geneva—GATT
Paris—OECD

The Australian Trade Commission maintained trade missions with diplomatic or consular status in the following cities:

Auckland, Frankfurt, Jeddah, Milan, Osaka, Toronto and Vancouver.

The Department of Immigration, Local Government and Ethnic Affairs maintained offices with consular status in Manchester and Edinburgh.

*Consulate-General
**Consulate

4

DEFENCE

This chapter outlines Australia's defence policy and its defence relationships with other countries; the higher Defence organisation; defence personnel and equipment developments; the functions, organisations, staffing and training of the three Services; and the functions and activities of the Defence support organisations.

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 Senate by the Minister for Defence and the House of Representatives by the Minister for Defence Science and Personnel.

Current Defence Policy

In March 1987 the Government released its White Paper on the Defence of Australia which outlined a comprehensive approach to Australian security and a basis for future planning, force development and defence activities.

The policy of defence self-reliance emphasises the ability to defend Australia and its direct interests using our own resources. This policy is pursued within an international framework of alliances and agreements which reflect Australia's commitment to contribute to peace and stability.

The security of our immediate geographic region is of fundamental strategic importance to Australia, and the continued development of an independent defence capability enhances our ability to contribute to peaceful development within the region. Priority in defence activity is consequently given to areas in Australia's region and high value is placed on fostering defence relationships with the countries of South East Asia and the South West Pacific.

Australia's security prospects are favourable. Our relationships with our allies and neighbours are basically sound and we face no identifiable military threats. Nevertheless, our defence planning recognises the possibility that threats could arise, which would have consequences for our security. A high priority is given to the development of military capabilities in the Australian Defence Force (ADF) which will enable it to defeat more limited threats that could arise at shorter notice. Defence planning also aims to ensure that there are options for a future response to more serious challenges to our security.

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 alliance 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 and projects undertaken with New Zealand continue to sustain Australia's close defence relationship with that country.

Higher Defence Organisation

The higher organisation of the ADF is dealt with in the *Defence Act 1903*, which provides that responsibility for the general control and administration of the ADF rests with the Minister for Defence. Under arrangements introduced in 1987, the Minister for Defence Science and Personnel has particular responsibilities within the Defence portfolio for the oversight of the Defence Science and Technology Organisation and ADF personnel matters.

The Minister for Defence has issued three directives laying out the responsibilities, both individually and jointly, of the Secretary and the Chief of the Defence Force (CDF). Under these directives the Secretary administers the Department of Defence and is responsible for advice to the Minister for Defence and the Minister for Defence Science and Personnel on policy, resources and organisation.

The CDF commands the Australian Defence Force and is responsible for advice to the Minister on the military aspects of ADF development including the size of the ADF and the balance within it in relation to strategic requirements.

The Secretary and the CDF are jointly responsible for advice on personnel policy requirements, including conditions of service, for the ADF; on promoting the efficient and economical use of resources within the ADF; for the continuing review of the adequacy of the organisation and administration of the Department of Defence and the ADF; and for recommending promotions and postings of two star officers and above, and the posting of one star officers to appointments which have more than single Service implications.

Major Defence Committees include the Council of Defence and the Defence Committee.

The function of the Council is to consider and discuss matters relating to the control and administration of the ADF and its respective arms referred to it by the Minister.

The Committee advises the Minister on:

- defence policy as a whole;
- the coordination of military, strategic, economic, financial and external affairs aspects of defence policy;
- matters of policy or principle and important questions having a joint Service or interdepartmental defence aspect; and
- such other matters having a defence aspect as are referred to the Committee by or on behalf of the Minister.

Defence Expenditure

The following tables give information about levels, categories and major items of defence expenditure.

DEFENCE FUNCTION EXPENDITURE, REVENUE AND OUTLAY, PERCENTAGE OF BUDGET OUTLAY AND GROSS DOMESTIC PRODUCT 1976–77 to 1989–90

	Expenditure $m	*Less revenue $m*	*Outlays $m*	*Per cent of budget sector outlays*	*Per cent of GDP*
1976–77	2,221	72	2,149	8.9	2.5
1977–78	2,434	94	2,340	8.8	2.5
1978–79	2,658	90	2,568	8.8	2.4
1979–80	3,064	99	2,965	9.3	2.4
1980–81	3,656	166	3,490	9.6	2.5
1981–82	4,261	207	4,054	9.8	2.6
1982–83	4,940	239	4,701	9.5	2.8
1983–84	5,537	239	5,298	9.3	2.8
1984–85	6,229	291	5,938	9.2	2.8
1985–86	6,981	308	6,673	9.5	2.8
1986–87	7,579	370	7,209	9.5	2.8
1987–88	7,754	332	7,422	9.4	2.5
1988–89	8,171	391	7,780	9.5	2.3
1989–90	8,905	428	8,476	9.7	2.3

EXPENDITURE ON DEFENCE FUNCTION

	1988–1989		*1989–90*			
	Achieved	*Per cent of Exp*	*Budget*	*Per cent of Exp*	*Achieved*	*Per cent of Exp*
Major categories	*$m*		*$m*		*$m*	
Capital						
Capital equipment	1,778.571	21.8	1,863.252	21.5	1,908.050	21.4
Capital facilities	383.568	4.7	411.810	4.7	446.477	5.0
Total capital	*2,162.139*	*26.5*	*2,275.062*	*26.2*	*2,354.527*	*26.4*
Personnel						
Service	2,262.621	27.7	2,296.371	26.5	2,359.938	26.5
Civilian	676.885	8.3	658.890	7.6	666.386	7.5
DFRDB and Special appropriations	594.447	7.3	660.284	7.6	670.996	7.5
Total personnel costs	*3,533.953*	*43.3*	*3,615.545*	*41.7*	*3,697.320*	*41.5*
Defence cooperation	*60.596*	*0.7*	*74.195*	*0.9*	*74.200*	*0.8*
Other operating costs						
Maintenance stores	747.185	9.1	817.325	9.4	832.891	9.4
Equipment repair	278.954	3.4	319.282	3.7	326.947	3.7
Building repair	170.866	2.1	191.935	2.2	198.497	2.2
Administrative expenses and other services	990.035	12.1	1,070.452	12.3	1,092.734	12.3
Rent	31.709	0.4	76.095	0.9	74.374	0.8
Total other operating costs	*2,218.749*	*27.2*	*2,475.089*	*28.5*	*2,525.443*	*28.4*
Defence housing	*195.487*	*2.4*	*230.134*	*2.7*	*253.229*	*2.8*
Expenditure	***8,170.924***	***100.0***	***8,670.025***	***100.0***	***8,904.719***	***100.0***
Revenue	*–433.807*		*–422.944*	—	*–427.126*	—
Trust accounts	*43.301*		*0.000*		*–1.322*	—
Prospective wage and salary increases	*0.000*	—	*80.000*	—	*0.000*	—
Defence function outlay	**7,780.418**	—	**8,327.081**	—	**8,476.271**	—
Defence appropriations attributable to other functions:						
Cultural and recreation (Young Endeavour)	1.967	1.909	1.691		—	—
Revenue not attributable to Defence	—	—	–0.650		—	—

MAJOR ITEMS OF INVESTMENT EXPENDITURE IN 1989–90

Major capital Projects	*Expenditure 1989–90*
	$m
Six submarines	460.2
F/A-18 project and associated equipment	212.6
ANZAC Ships	201.1
Construction of 2 Fates	144.5
Seahawk helicopters	80.9
DDG modernisation	55.0
Blackhawk helicopters	53.9
Army light field vehicles	51.8
Basic trainer aircraft	45.3
HF and VHF single channel radios	38.9
Defence integrated secure communication network	31.0
F-111 avionics update	29.0
Army living-in accommodation—all States	27.6
Jindalee	25.6
Relocating of explosives factory—Albion	21.2
105mm Army field gun	20.3
Acquisition of 4 FFG frigates	19.6
P3C electronic surveillance measure	17.7
Laser airborne depth sounder	16.6
School of Military Engineering—Casula	14.6
Supply Systems Redevelopment Project	14.4
Acquisition of small arms	11.9
Helicopter facility—Townsville	11.9
21 Supply Bn warehouse—Moorebank	11.8
Medium trucks for Army	11.2
Army bridging	11.1
Trucks, tractors and semi-trailers for Army	10.7
Australian Defence Force Academy	9.8
Integrated weapons workshops—Garden Island NSW	8.4

AUSTRALIAN DEFENCE FORCE

The objective of the Australian Defence Force (ADF) is to plan, develop and maintain forces for contingencies within Australia's area of direct military interest and to defend Australia and its interests. The ADF is structured to be able to undertake current and forseeable peacetime operational tasks as directed by the Government, deal effectively with the levels of credible contingency that could arise over shorter timescales, and provide a suitable basis for timely expansion to meet higher levels of threat if Australia's strategic circumstances deteriorated over the longer term.

The Chief of the Defence Force (CDF) commands the ADF and is the principal military adviser to Government. He exercises this command through a hierarchy of environmental commanders for maritime, land and air operations and through the Commander, Joint Forces Australia, who is appointed when needed.

The structure of the ADF continues to be refined as operational experience, including that arising from Exercise Kangaroo 89, allows further development of doctrine appropriate for the levels of credible contingencies that could arise over shorter time scales.

Increasing emphasis is being placed on the importance of an integrated approach towards ADF planning and development, and on effective joint operations. Accordingly, new organisations and procedures have been implemented in Headquarters ADF which have resulted in an improved capacity of senior staff in HQADF to address and formulate policy, by concentrating long term planning, programming, and force development staffs in a joint working environment within HQADF. This also allows for more direct ADF involvement in Defence longer term planning, including military strategic planning, force development, force expansion and mobilisation, ADF preparedness and readiness, science and technology, and Defence facilities policy.

Royal Australian Navy

The aim of the Royal Australian Navy (RAN) is to raise, train and maintain seaborne forces structured to deal with credible maritime contingencies in Australia's area of direct military interest, generally as part of a joint force, and to provide a base for longer term expansion should this be required.

Higher organisation

The Chief of Naval Staff commands the RAN, subject to the command of the ADF by CDF. Principal staff officers to the Chief of Naval Staff are the Deputy Chief of Naval Staff, the Assistant Chief of Naval Staff (Personnel) and the Assistant Chief of Naval Staff (Materiel). Other senior officers of the RAN include the Flag Officer Naval Support Command and the Maritime Commander, Australia.

Ships of the Royal Australian Navy

Guided missile destroyers: *Perth, Hobart, Brisbane;* guided missile frigates: *Adelaide, Canberra, Sydney, Darwin*; destroyer escorts: *Parramatta, Stuart, Derwent, Swan, Torrens*; submarines: *Oxley, Otway, Ovens, Onslow, Orion, Otama*; amphibious heavy lift ship: *Tobruk*; landing craft heavy: *Wewak(a), Balikpapan(b), Tarakan(b), Labuan(b)*; Fremantle class patrol boats: *Fremantle(b), Warrnambool(b), Dubbo, Geraldton, Wollongong, Bunbury, Ipswich, Townsville, Bendigo, Whyalla, Gladstone, Cessnock, Launceston, Gawler, Geelong*; training ship: *Jervis Bay*; fleet oiler: *Success*; auxiliary tanker: *Westralia*; hydrographic survey ships: *Moresby, Flinders*; survey motor launches: *Paluma, Mermaid, Shepparton, Benalla*; oceanographic survey ship: *Cook*; interim survey vessels: *Betano(c), Brunei(c)*.

NOTES: *(a)* Operational Reserve. *(b)* Crewed by Reserves. *(c)* Landing craft heavy.

Fleet Air Arm

The RAN currently operates three different types of helicopter (Sea King Mk50/Mk50A, Bell 206B and Squirrel) and HS748 electronic warfare training aircraft from HMAS *Albatross* at Nowra, New South Wales. Seahawk helicopters are being trialed prior to introduction into naval service. The RAN also operates Jindivik pilotless target aircraft from the Jervis Bay Range facility.

Force structure

The force structure of the surface combatant force is based upon the development of three tiers of capability as set out in the 1987 Defence White Paper. The guided missile destroyers and frigates, of the *Perth* and *Adelaide* classes respectively, satisfy the first tier requirements. The River Class destroyer escorts currently fill the second tier of capability and have played a major role in maintaining Australia's presence in South-East Asia, deploying to ports throughout the region and participating in Five Power Defence Arrangements' exercises. The third tier capability is provided by the Fremantle class. These vessels, amongst other duties which included contributing to the Australian presence in the South-West Pacific and South-East Asia, maintained 1,885 days on patrol in the Australian Fishing Zone and made 45 arrests of foreign vessels illegally fishing in the Zone.

The Government's initiative to establish an operational navy based in two oceans has progressed with the leasing of the auxiliary tanker HMAS *Westralia*. Other elements of the RAN, including the submarine force and the mine counter-measures force, will eventually have operational units based on the east and west coasts of Australia.

Australian Army

The objective of the Australian Army is to raise, train and maintain ground forces structured to deal with credible land contingencies in the defence of Australia, its territories and interests, generally as part of a joint force, using both Regular and Reserve forces; and provide a basis for longer term expansion.

Higher organisation

The Chief of the General Staff commands the Army subject to the overall command of the ADF by the CDF. His principal staff officers are the Deputy Chief of the General Staff, Assistant Chief of the General Staff—Personnel, Assistant Chief of the General Staff—Materiel, Assistant Chief of the General Staff—Army Reserve and Assistant Chief of the General Staff—Logistics.

The Army is organised into three commands as follows:

- *Land Command*—commands all field army units of the Australian Army, both Regular and Army Reserve.
- *Logistic Command*—commands the principal logistic elements of the Army.
- *Training Command*—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. The military district headquarters also handle those matters in which both Commonwealth and State Governments are involved.

- *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.

Force structure

The Army's structure must include highly mobile forces capable of rapid deployment anywhere within Australia, its territories and its area of direct military interest, and able to conduct protracted and dispersed operations in harsh terrain where the existing infrastructure and resources are sparse.

The Army combat force structure is based on provision of a ready deployment force, a manoeuvre force, ready deployment force augmentation units, expansion base force for higher levels of conflict and communication support forces. These forces include:

- ground surveillance and reconnaissance capabilities;
- a light air portable force, including an airborne (parachute) element, capable of rapid deployment within Australia and its territories;
- tactical battlefield air support and mobility, including helicopters;
- a force in support of the civil authorities capable of resolving high risk terrorist incidents;
- forces capable of following up initial deployments;
- forces of greater combat power to reinforce deployed formations if necessary; and
- forces capable of deploying to defend vital defence installations and national infrastructure.

Royal Australian Air Force

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

Higher organisation

The RAAF is commanded by the Chief of the Air Staff (CAS) who is responsible to the Minister for Defence through the CDF for that command. He is assisted by the Deputy Chief of the Air Staff, the Assistant Chief of the Air Staff—Personnel, and the Assistant Chief of the Air Staff—Materiel, all located in Air Force Office Canberra.

RAAF commands

The RAAF is organised into three functional commands—Air Command with headquarters at Glenbrook; and Logistics Command, and Training Command, with headquarters in Melbourne. Air Command is responsible for the conduct of air operations and operational training. Logistics Command is responsible for logistics and maintenance of RAAF equipment. Training Command is responsible for the basic training of personnel. Air Command comprises the following groups: Strike/Reconnaisance Group (SRG), Tactical Fighter Group (TFG), Air Lift Group (ALG), Maritime Patrol Group (MPG), and Tactical Transport Group (TTG).

Aircraft

Air Command

SRG—F-111 (Amberley)

TFG—F/A-18 Hornet, Macchi, Winjeel (Williamtown, Tindal and Pearce)

ALG—C130 Hercules, Boeing 707, Falcon 900, HS748 (Richmond, East Sale and Canberra)

MPG—P3C Orion (Edinburgh)

TTG—Caribou (Townsville)

Training Command

Basic Pilot Training—CT4, PC9 (Point Cook and Pearce)

Instructor Pilot Training—CT4, Macchi and PC9 (East Sale)

Navigator Training—HS748 (East Sale)

Force structure

The Air Force structure reflects the need for air forces to be capable of conducting independent operations, as well as supporting maritime and land operations. The Air Force is to provide:

- national airspace surveillance and control together with broad area surveillance and a capability for air intercepts;
- combat aircraft for air defence and offensive air support;
- combat aircraft for reconnaissance and strike against maritime and land targets;
- a long range maritime patrol force for sea surveillance, maritime targeting and strike, antisubmarine warfare, aerial mine laying and search and rescue;
- an air transport force for strategic transport and air to air refuelling;
- a tactical air transport force to support land operations;
- transport aircraft for special transport operations such as VIP tasks and aeromedical evacuation;
- a search and rescue capability for RAAF and foreign military aircraft operating in the Australian area;

- a command and control organisation; and
- a logistics organisation for supporting the operation and deployment of forces.

Defence Personnel

The current manpower strategy continues to be sensitive to the need to preserve scarce manpower resources. The objective of this strategy is to promote the most effective use of all Defence personnel resources including Regular and Reserve personnel, civilians and contractors. Added to this the Government has directed that the Defence organisation move towards a new management philosophy. The influence of the Government's financial management improvement program, including program management and budgeting focuses on management for results. Program management and budgeting was introduced into the Defence organisation on 1 July 1990. The introduction of program management and budgeting will mean more responsibility and accountability for Defence managers.

Service personnel

The concepts of 'Trained' and 'Training Force' have been introduced. This approach to Service manpower numbers was created in 1987–88 as a more effective way of stating ADF manpower requirements, allocations and achievements. The Trained Force is designed to effectively meet the operational tasks required by the Government. The Training Force is conceived as a flexibly-sized element of the ADF whose main objective is to provide comprehensive pre-employment training to newly recruited cadets and trainees. When trained, these personnel are made available to the Trained Force to maintain its strength. This concept insulates the Trained Force from the influences of variable separation rates in ADF personnel.

DISTRIBUTION OF SERVICE PERSONNEL AND CIVILIAN STAFF BY PROGRAM AVERAGE STRENGTH 1989–90

	Australian Defence Force				
Program	*Reserves*	*Trained force*	*Training force*	*Civilian*	*Total*
Current Forces					
ADF Command	—	637	855	293	1,785
Navy	185	13,404	1,475	4,868	19,932
Army	2,886	27,298	2,856	6,210	39,250
Air Force	231	19,770	1,858	2,746	24,605
Total Current forces	*3,302*	*61,109*	*7,044*	*14,117*	*85,572*
Defence development	—	97	—	798	895
Defence support	—	45	—	3,873	3,918
Corporate services	—	530	—	5,134	5,664
Total	**3,302**	**61,781**	**7,044**	**23,922**	**96,049**

NOTE: The figure for Reserves shows the average number of full-time equivalent reserves for the year. For budget purposes, the average number of staff years is calculated from the number of training days used. Civilian figures include paid inoperative staff, part-time staff and casual labour expressed as full-time equivalents.

Defence Support Organisations

Acquisition and Logistics Organisation—ALO

The Acquisition and Logistics Organisation was formed in 1989 from the previously separate Capital Procurement Organisation and Defence Logistics Organisation. As well as capital, replacement and maintenance procurement, its other functions include Defence Facilities, contracting, computing and development of defence-related industry.

Major activities

The major activities during 1989–90 were:

Capital equipment procurement

- management of the acquisition processes for major capital projects including the Anzac ships, new submarines and Jindalee over-the-horizon radar; expenditure in 1989–90 was $1,660 million; and
- completion of the F/A-18 contract with delivery of the last aircraft.

Industry policy

- execution of 16 manufacturing and marketing licence agreements with industry for technologies developed by Defence;
- industry surveys to identify barriers to Australian firms seeking Defence business (a report on the findings is expected by the end of 1990), and to determine the impact of defence offsets and other defence programs on Australian industry;
- rationalisation of Defence Required Support Capabilities for which special funding arrangements are made to Australian Defence Industries Pty Ltd;
- actions towards decommissioning, and return for local use, of the Albion Explosives Factory and Explosives Factory Maribyrnong sites;
- coordination or joint sponsorship of Australian participation in defence trade fairs in the US and Malaysia, and dissemination of material at the Canberra commercial exhibition AIDEX89;
- agreements with UK and Sweden for collaboration on selected equipment development projects; and
- effective management of Customs (Prohibited Exports) Regulations, with the issue of over 1,500 permits in 1989–90.

Australian membership of the Coordinating Committee for Multilateral Export Controls (COCOM), a non-treaty group of countries formed to coordinate controls on the export of strategically sensitive technology having both civil and military uses has issued several reference booklets, including:

- Doing Australian Defence Business;
- The Australian Defence Offsets Program;
- Australian Controls on the Export of Defence and Related Goods;
- Australian Controls on the Export of Technology with Civil and Military Applications;
- Reference Manual on Defence Intellectual Property; and
- Value Management Incentive Contracting.

Logistics

- promulgation of the Defence Logistics strategic planning guide;
- rationalisation of Defence warehousing;
- progression of the Supply Systems Redevelopment Project including the award of a contract for a commercial software package, establishment of a mainframe development environment and development of a local area network for the Army at Moorebank;
- establishment of a single Defence Quality Assurance Organisation;
- revision of Defence policy for the safe storage of ammunition and explosives;
- development of policy guidance for the contractual relationship between Defence and Australian Defence Industries Pty Ltd;
- development of procedures with civil transport organisations to use their resources in times of emergency;
- renegotiation of a Cooperative Defence Logistics Support Agreement with the US; and
- sale of the surplus Mirage aircraft and Centurion tanks.

Contracting

- arrangement of 2,372 contracts valued at $5,016.35 million;
- implementation of Defence purchasing reforms consistent with the introduction of Program Management Budgeting on 1 July 1990, including production of policy manuals and commencement of training for up to 1,500 purchasing staff; and
- streamlining of senior structure of the contracting organisation under a Division Head.

Facilities and property

- development of strategic infrastructure in the north and west of Australia;
- rationalisation and relocation of facilities;
- upgrading of living-in accommodation;
- conduct of environmental impact studies in major Defence facilities proposals; and
- development of land management plans for major training areas.

Defence Science and Technology Organisation—DSTO

DSTO is Australia's second largest research and development organisation employing some 1,150 professional scientists and engineers in its total staff of about 3,500.

DSTO assists the Australian defence community by providing specialist scientific and technological support. It provides scientific and technical advice on defence policy matters and on the selection and acquisition of new equipment and systems, including their suitability for operation in the Australian environment. It puts considerable effort into helping solve scientific and technological problems of the Australian Defence Force.

DSTO maintains an extensive scientific and technological base in defence related areas and collaborates with tertiary institutions and industry. It provides expertise and facilities to industry, and undertakes joint research with international partners in defence cooperation.

DSTO conceives new equipment devices or systems, and if necessary develops prototypes to operate in Australia's special physical and military environment. Noted examples are the Barra sonobuoy, Jindalee over-the-horizon radar and Kariwara towed array.

To help achieve these goals, DSTO has an extensive International Program. With about 100 cooperative arrangements in place across eight countries and a further 21 agreements under negotiation, DSTO receives substantial benefit in the sharing of the costs of research, enabling it to participate in relevant projects which would otherwise be completely beyond DSTO's financial reach. The knowledge gained in these international programs assists DSTO to tailor its research program and not duplicate that of other countries on topics of mutual interest.

As part of a major five-year restructuring begun in 1987, DSTO is involving industry early in the research and development of projects and is contracting out as much engineering to industry as possible.

In response to Government policy, DSTO is fostering a more commercial outlook to encourage the transfer of technology to the private sector.

Structure

The DSTO laboratory structure consists of five mission-oriented laboratories with integrated scientific and engineering functions, as follows:

- Aeronautical Research Laboratory, based in Melbourne, with a Salisbury (SA) component;
- Electronics Research Laboratory, based in Salisbury, with a component in Canberra, ACT;
- Materials Research Laboratory, based in Melbourne, with components in Pyrmont (Sydney), Scottsdale (Tasmania) and Innisfail (North Queensland);
- Surveillance Research Laboratory, based in Salisbury; and
- Weapons Systems Research Laboratory, based in Salisbury, with a component in Pyrmont, NSW.

The DSTO Central office is located in Canberra ACT.

Natural Disasters Organisation—NDO

NDO has a number of responsibilities aimed at minimising the effects of natural disasters on the Australian community and provides infrastructure and training to cope with natural disasters. In discharging these responsibilities it:

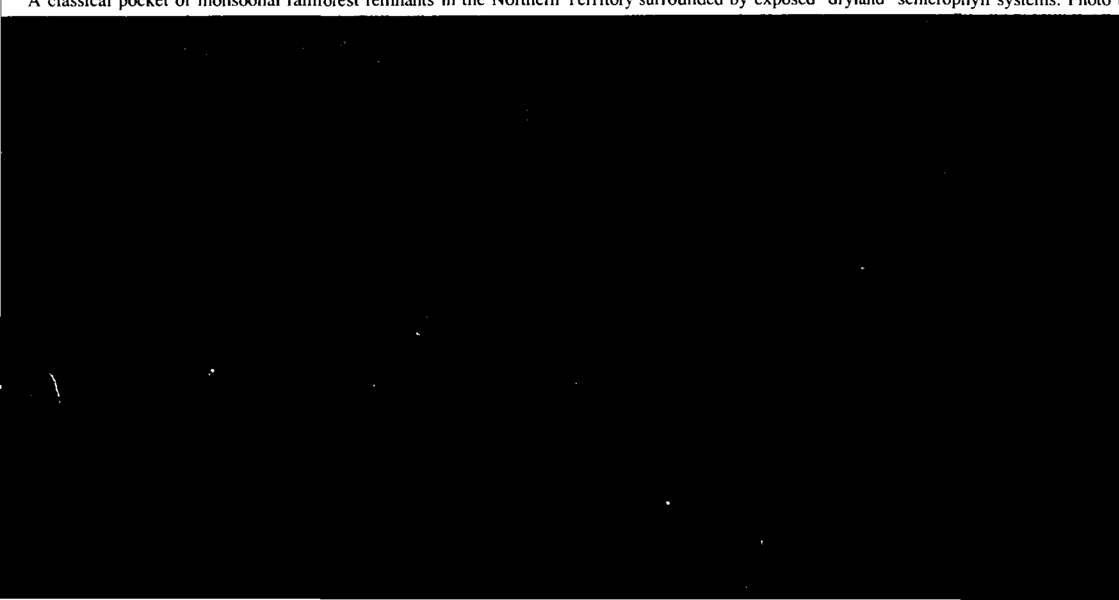
- develops national counter-disaster plans and civil defence policy and plans;
- coordinates the provision by the Commonwealth of physical assistance to the States and Territories in the event of a disaster;
- operates the National Emergency Operations Centre;
- coordinates government and non-government disaster relief to Papua New Guinea and the South-West Pacific nations at the request of the Australian Development Assistance Bureau;
- directs Commonwealth support programs to the State and Territory Emergency Services;
- maintains fallout shelter survey expertise;
- directs the Australian Counter Disaster College in training and educating disaster managers and researching aspects of disasters and of disaster management; and
- manages Australian participation in the International Decade for Natural Disaster Reduction.

Wonga Walk, Dorrigo National Park (a World Heritage area). Photo by Geoff Biddle.

Common moss in rainforest gully. Photo by P. I

Revegetation work is underway in the Henty
Forestry Commission of Tasmania.

A classical pocket of monsoonal rainforest remnants in the Northern Territory surrounded by exposed 'dryland' schlerophyll systems. Photo by Diane Lucas and Jere
Russell-Smith.



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A wet tropics endemic butterfly, the Cairns Birdwing. Photo by J. Meade.

Tasmania, to rehabilitate rainforest stretches damaged by the construction of an explora

Warm temperate rainforest, East Gippsland. Photo by Noel Ryan.

Sea Acres Rainforest Centre, Sea Acres Nature Reserve, Port Macquarie. Photo by Geoff Biddle.

A pair of Northern Red-eyed Tree Frogs in Daintree lowlands, far north Queensland. Photo by Michael Trenerry.

SAFEGUARDING OUR RAINFOREST HEIRLOOMS

(This special article has been contributed by Bill Reed, consultant to the National Rainforest Conservation Program)

Although moist rainforests cover only about six per cent of the world's area, they contain well over half of the Earth's species of animals and plants.

These two bare statistics from the United Nations' World Commission on Environment and Development embody the wonder and the alarm we feel when we look at the health of our most lavish landform system—the rainforest ecosystem.

The wonder of rainforests is that they are such complex, interlocking systems that a small overall area hosts probably a minimum of five million, and maybe as many as thirty million, species of our inherited life forms.

The alarm is that we also know that somewhere between seven and ten million hectares of these supreme ecosystems are being cleared each and every year, with a further ten million hectares 'grossly disrupted'. This information comes from UN surveys done in the late 1970s. Since then the rate has accelerated, not decelerated.

What, then, is happening to our heritage of a living planet, to the marvellous variety of animals and plants handed down to us, when the key to their survival seems to lie in the very rainforests we are disfurnishing from our world at such a rate?

In Australia, we are trying to find the answer to this through new programs of conservation and balanced management of our rainforests. The need for their conservation is as urgent and necessary as anywhere in the world. The total Australian rainforest area might be small in global terms—its two million hectares represents less of an area than is uprooted in the Amazon basin each year alone—but its ratio of species to area is as impressive as that of any other rainforest. Furthermore, the Australian rainforests are unique in a number of important ways: their variety is unusual; the range of climates in which they have survived is exceptionally wide; and the number of plants and animals that are endemic to them and are still identifiable as being of very primitive stocks is scientifically exciting.

Most of the world's rainforests are found around the thin equatorial belt within such regions as the Amazon and Congo river basins, and the Indo-Malaysian region. However, there are also a surprising number of rainforest pockets that survive in quite arduous climatic conditions north and south of tropical latitudes. (This patchwork pattern of rainforests is very noticeable in Australia, where pockets occur over a surprisingly wide north–south range—from the north-west of Western Australia, down through Queensland, New South Wales, Victoria, and stretching into Tasmania.)

Unfortunately, this fragmented pattern has not helped the survival of rainforests in a world voracious for their wonderful hardwood timbers. Indeed, the collective system of rainforests is probably more under threat than any other ecosystem in the world. This is primarily because of the current clearing practices around the world of this invaluable natural resource each year.

The potential tragedy is that, if we persist with this current rate of clearing, we could well dispossess the world totally of its rainforests by the year 2000. The effect of this on the world's genetic diversity—and, in consequence, humankind's well-being—would be nothing short of catastrophic.

It is already accepted that the recent diminishing of our world stock of rainforests has been a major cause, directly or indirectly, of the extinction of more than 90 species of birds, 36 species of mammals, and an uncounted number of invertebrates in modern history—a situation that the British ecologist Dr Norman Myers considers the greatest spasm of mass extinction since life began.

After all, rainforests have been, and still are, the crucibles of our medical, agricultural and environmental welfare. In a real sense they hold the key to our genetic vault. Already this century, our scientists have used the rainforests genetic bank to improve such crops as bananas, sugar, cocoa, rubber and coffee—staple crops that are no different from any other agricultural crops in their need for consistent genetic boosts to improve yield, nutrients or disease resistance. The same is just as true for our animal sciences.

The oldest rainforests of all

It is against this vexing world-wide backdrop that the Australian Government instigated a range of initiatives designed to protect, conserve, rehabilitate and transmit to future generations environmentally-sensitive rainforest areas in the country.

Some of these programs are specific to rainforests themselves, and some impinge upon rainforests as part of an overall approach to broader ecological issues.

Of a specific nature is the Government's listing of particular rainforest areas either on the Register of the National Estate through the Australian Heritage Commission or upon UNESCO's World Heritage List. Where applicable, too, State Governments have given selected rainforests some form of limited-use status, such as national park or some equivalent reserve status.

Three of Australia's World Heritage areas contain either a majority or a substantial part of rainforest. These are the Wet Tropics of Queensland, the Australian East Coast Temperate and Subtropical Rainforest Parks in north and central New South Wales, and the Tasmanian Wilderness. In these, Australia has committed itself to a major international treaty which obliges it to conserve, preserve and protect well over one million hectares.

There are also many projects that have general relevance to the conservation of rainforests in the wider range of government initiatives in national programs, either administered by Federal, State or local governments or through community and landholder groups.

The major arms of the Federal Government's initiatives are the National Conservation Strategy, Greening Australia (which includes the One Billion Trees program), the National Biological Diversity Strategy (which includes the Endangered Species Program, the Save the Bush Program and the environmental data base), Landcare and the Australian National Parks and Wildlife Service.

With specific regard to rainforests on a national scale, however, the Government's principal conservation vehicle is the National Rainforest Conservation Program (NRCP). Implemented in 1986, it is an overview strategy which aims at the protection of the whole of the rainforest panorama in this country and in its external territories of Christmas, Cocos-Keeling, and Norfolk Islands.

One of the NRCP's first tasks was to identify not only the rainforest areas to be protected, but also to define what exactly a rainforest was. This was not as easy as it would seem, because very little had been done in the study of rainforest ecology, biology or zoology. There was a reason for this.

Until recently, it was thought that rainforests were somehow 'alien' to the Australian landscape. Rainforests mainly thrived in the tropical north, and seemed more suited to the Asian-Pacific image of high rainfall and humidity, and not to the hard-leaved type vegetation, like gums and wattles, which seemed so rightly 'Australian'. Therefore, the pundits speculated, rainforests must have been recent invaders across the land bridge that, in fairly recent geological times, connected this country with New Guinea.

However, the evidence quickly mounted that this could not be so. It was not just that rainforests had evidently adapted themselves to various climatic conditions (the temperate rainforests of New South Wales and the subtemperate rainforests in Tasmania) which bore witness to longer local habitation than was ever imagined. It was other irrefutable evidence, such as the discovery in north-east Queensland's Wet Tropics of no less than fourteen of the world's nineteen known families of surviving ancient angiosperms or flowering plants, and the existence of animal species older than anything that occurred in the forests of our neighbours to the north.

These ecosystems are not foreign to the Australian landscape at all. They are, in fact, older 'natives' than gum trees. They show us what the primordial rainforests of Gondwana were actually like.

But they do more than that, for it is now realised that, literally out of them, developed the vegetation of Australia today—our great acacia, eucalypt, paperbark and mangrove forests. In them are intimations of the beginnings of the marsupials, of the age of flowering plants, of the development of song birds upon the Earth and of how the continents broke apart.

Indeed, we can now acknowledge that the wet tropical rainforests of north-east Queensland are surviving fragments of actual Gondwana forests and, as such, are among the oldest rainforests on Earth.

For a long time, too, there was some confusion about the actual definition of a rainforest, since there was a considerable difference in appearance between the lush, broad-leaved coastal rainforests and those deep in the Tasmanian cool temperate wilderness, or those stunted on exposed mountain tops. Were these 'true' rainforests too?

What is a rainforest?

Whether it be a mainly deciduous monsoon rainforest or a beech-dominated cold-climate rainforest, there are obvious differences that distinguish a rainforest from other types of forests.

One of these is the closed canopy structure of an undisturbed rainforest. This can be dense, where tree crowns are tightly interlocked, or quite mottled to give a quite dappled forest floor. Whichever, the forest system is 'closed', as against being 'open' like a eucalypt woodland. And it is under this closed-canopy situation that rainforest animal and plant species grow, compete and specialise.

This canopy system is the prime cause of those other sensual rainforest characteristics, such as the continuously-high humidity, the soft light and the blunting of temperature extremes.

Then there are the characteristic plants that are rare or absent in other forest types. These include the epiphytes, such as tree orchids; the parasites, such as the magnificent fig trees; the lianes; the variety of mosses and lichens; the ferns, vines and palms; and the trees with special life forms like buttressing of their root systems, strangler figs, flower-fruit that grow out of the trunks and not from branches.

Both the canopy and the understorey systems can be indicative of the type of rainforest they are by the number of layers of which they consist. In the warmer, moister, protected areas, a canopy might often consist of two or more layers of trees and/or a number of tree species. The cooler or higher from sea level you get, the less rich in species are the rainforests and, in consequence, the layers can be reduced to even a single layer.

Where and what type?

There is quite a large number of different types of rainforest in Australia. These occur throughout a wide geographical range, stretching in an arc from the north-west to the south-east through some 6,000 kilometres.

As varying in both structure and floristics as they seem, however, our rainforests form part of a whole that has been whittled away until only one quarter remains of what was standing at the beginning of our European history.

A great deal of what does remain tends to inhabit steep or difficult terrains denying bulldozers the easy access that was possible to lowland and tableland rainforests. These latter types made quick way for coastal development, forestry or agriculture. So much so, that if we could gather all the rainforest in Australia, we would have an area of no more than 70 kilometres in diameter on the mainland and only about 38 kilometres in diameter in Tasmania.

Broadly speaking, the rainforests in Australia range from being monsoonal (north Australia), tropical (Queensland, above 18° latitude), subtropical or warm temperate (Queensland and New South Wales, approximately between 18° and 33° latitudes), dry rainforest (New South Wales), cool temperate (Tasmania), wet sclerophyll with well-developed rainforest understorey in Victoria.

The monsoon rainforests

The monsoonal regions of north Australia are characterised by a number of different types of vine rainforests, or vine thickets.

These are generally medium-leaved systems and are distributed in generally small patches over a surprisingly wide range of country.

There are the evergreen rainforests with canopies up to 35 metres; these can change from being complex in structure around permanent water to quite simple structures in sandstone terrain. There is also the semi-evergreen or deciduous type that survives in seasonally dry conditions, such as coastal dunes.

The wet tropical rainforests

This type contains the most luxuriant communities of rainforests, especially around the wet and humid lowland areas of north-east Queensland.

In this region of rugged mountains and sweeping valleys are found the hardwood giants that have avoided the saw teeth, amongst all the wonders and colour hues of the rainforest of legends.

Characteristically, these forests have densely closed canopies that can be 40 or 50 metres above ground. Beneath is the understorey of the smaller trees and saplings waiting for a break in the canopy. If the canopy remains undisturbed and unbroken, the forest floor will be quite bare of plants, rotting logs, litter, humus and suchlike; if incomplete, the understorey will be quite complex and competitive.

Vines, too, will vary according to disturbance or not, and to such factors as elevation, soil quality, climatic aspect and exposure. In places—where, for example, the eastern slopes of the coastal range have been recently hit by a cyclone—the rainforest is so draped by the faster growing vines that it seems shrouded with a choking green web.

Yet these tropical rainforests can be differentiated from the equatorial rainforests of South America and the Indo-Malaysian regions. Even in some of the wettest country in the world, between Tully and Cape Tribulation (in north Queensland), there is a dry season each year when the rainforests will become almost parched, even to the extent of some of the trees wilting.

Indeed, it largely depends on the length of this Dry as to whether the Australian rainforest can be classified evergreen, or semi-evergreen or deciduous. Apart from these two broad divisions, rainforest communities are further classified as to whether they are complex or simple in structure; large-leaved, medium-sized-leaved, or small-leaved; ferny or vines according to rainfall, drainage, soil fertility, shelter, and height above sea level.

Because of the vast changes to all these factors in such a rugged and mountainous terrain, there has evolved no less than 13 broad categories, further divided into 27 communities in the north-east region of Queensland.

The subtropical rainforest

This rainforest is the major rainforest form that occurs on fertile soil under fairly high rainfall and moderately warm temperatures. It has two basic types: warm subtropical rainforest and cool subtropical rainforest.

Warm tropical rainforests suffered greatly through clearing for development over the decades, because it best developed along the lush alluvial coastal plains. Cool subtropical rainforests occur on higher altitudes, generally, but contain fewer species of animals and plants.

Both types have meduim-to-large leaf sizes and characteristically show strangling figs, palms, large woody vines, epiphytes and stem buttressing. These are widespread in south Queensland and northern New South Wales.

An unusual derivative of the subtropical rainforests is the littoral rainforest. Small stands of this occur on coastal headlands and sand dunes. In relatively sheltered places, it grows as low, dense, wind-sheared thicket.

The dry rainforests

The 'dry' rainforests are also known as Araucarian notophyll vine forests or semi-evergreen vine thicket forests, and are generally found on fertile soils under drier conditions. They are of fairly simple structure, normally with two distinct tree layers—a lowish closed canopy above which is a sweep of higher emergents not generally recognised as rainforest trees. Some of these emergents are likely to be such trees as hoop pine, lace bark, teak, ash, silky oak, fig and koda.

You won't find many palms or epiphytes like orchids in these forests, but large vines are fairly common. Mosses and ferns can be scarce in one patch, but quite common in another, especially if it is a cool, montane environment.

The warm temperate rainforests

These are also known as simple notophyll (medium-size) vine-fern forests. They are generally more simple in structure and species than the subtropical rainforests.

Frequently, the canopy is of only one or two emergent species with medium-to-small leaf size. There is very little buttressing of the root system and most of the trees, many of them coachwood, have slender trunks. There is very little visual evidence of palms or woody vines or orchid-like epiphytes. However, small, wiry vines are quite common as are ferns, lichens and mosses.

A characteristic of these types of rainforests is the white ghostly look of the tree trunks. This is caused by the great abundance of epiphytic lichens.

Warm temperate rainforests have a wide north–south area of distribution, from the Atherton Tableland in north-east Queensland right down to East Gippsland in Victoria. They are generally found on higher ground and in poorer soils than subtropical rainforests in the north, but tend towards better soils at lower altitudes at the southern stretches of their range.

The cool temperate rainforests

These are small-leaved (microphyll) moss or fern forests. Their northern range is from the Lamington Plateau in southern Queensland, extending through New South Wales and Victoria to the wilderness of Tasmania.

These communities have an even more simple structure and are normally associated with a single species occupying whole areas of canopy. Even at the lower levels, there tend to live only a few species. Palms are rarely seen, but ground ferns, mosses and lichen are plentiful.

A major characteristic of cool temperate rainforests is the prevalence of tree ferns (particularly the well-known soft tree fern), and the occurrence of antarctic beech and pinkwood. Here, delicate growths of rich green cloak damp rocks or drape their long curly tangles over tree branches.

In Tasmania, rainforest is usually defined as a system with trees higher than eight metres and dominated by such species as myrtle-beech, sassafras, celery-top pine and King Billy Pine.

Cool temperate rainforests are entirely evergreen, the deciduous dwarf beech being the only exception. This endures in Tasmania, where, in late autumn, it throws its stunning red, gold and orange display against the backdrop of icy highland lakes and towering mountains.

The wet sclerophyll forests

These are forests that have eucalypts as canopy trees, but whose understorey is comprised mainly of well-developed rainforest plants. They occur mainly in Victoria and Tasmania.

This association of sclerophyll and rainforest types is a curious one that relies upon opportunity, rather than on a competitive basis. For example, as wet sclerophyll forests mature, the eucalypt emergents gradually become more sparse and are replaced by rainforest trees.

At this stage, these forests are called mixed forests. In fact, if nature or man left them undisturbed, it would be seen that the mixed-forest stage is a midpoint in the evolvement of the forests' becoming full rainforests, with all the eucalypts being displaced. For one thing, the shade-intolerant eucalypt seedlings just cannot survive rainforest competition.

This evolvement only rarely comes to fruition over the ages, and, basically, the reason for this is fire. Whether infrequent wildfire or fire planned regime by humans, fire destroys the rainforest plants and encourages the eucalypts. The forests then return to the point on a continuous pendulum swing we call 'wet sclerophyll', with eucalypts in dominant vitality.

They then begin to age; the rainforest species begin to reassert themselves in undisturbed conditions; and the pendulum moves the other way. If fires are too infrequent, the eucalypts will die out and the system becomes rainforest. If natural or man-made fires are too frequent for rainforest recovery, the forests will remain wet sclerophyll—or even become open woodland.

The push-pull with associated forests

In fact, this pendulum swing of rainforest dominance over, and subordinancy to, neighbouring forests has been a feature of the remarkable survival of the Australian rainforest remnants.

Looking back to the time when it broke away from what was left of Gondwana some 90 million years ago, the Australian continent became a kind of life raft for rainforests, because it drifted northwards to warmer climates at the same time as the world was cooling. In this way, the Australian rainforests were sheltered from what might have been disastrous falls of temperature.

In more recent geohistorical times, the rainforests were able to survive the last great ice age (which lasted until only about 8,000 years ago) by being able to retreat into sheltered, well-protected refuge areas, or what are referred to as *refugia*. It was out of these refugia that the rainforest expanded when conditions become favourable again, perhaps because of fewer fire surges or local climate warming. And it was back to the refugia that they contracted when conditions favoured the eucalypt-type or pine-type systems.

Here was, and still is, a natural push-pull cycle with their traditional forest neighbours—a vital concomitancy that is the natural order of things and which came to be mutually beneficial.

We might try to define a rainforest in botanical terms, but, for the animals which move from rainforest to bordering sclerophyll or mangrove forest, the definition is meaningless. Even for survival of the rainforest plants, their system's close affinities with neighbouring systems can be life-necessary. Fire, for example, can do irreparable damage to a healthy rainforest; yet, if that rainforest is surrounded by a fire-liking sclerophyll forest, then what would have been a devastating blaze will be likely to follow the 'tinder path' of the latter, rather than irreparably wound the rainforest.

Traditionally associated forestal systems, then, are of vital importance to not only the health, but also to the very survival of the rainforest systems and their animals and plants. These are the tall, open sclerophyll forests, the open woodlands, the mangrove forests, the melaleuca or paperbark swamps. They form life-supporting corridors into and around the rainforests, which may mitigate the effects of fire, or be home to a species' particular seed-disperser, and so forth.

They are also part of the rainforests' domains through expansion, just as much as the rainforests are part of their domains through contractions. All are interdependent, and all therefore have to be looked at in relationship to rainforest welfare through conservation measures.

It is because of such factors that, for example, the Wet Tropics World Heritage Area of Queensland incorporates sclerophyll, mangrove and paperbark systems that make up one-third of its total 9,000 square kilometres. The associated forests are important to the very health of rainforests there; without them the Wet Tropics rainforests, as a composite living organism, would have been exposed and vulnerable—as indeed would have many of their living inhabitants which exist along the blurred lines of their margins.

It is also why some of the projects funded by the National Rainforest Conservation Program are ones which, on the surface, might seem to have only a tenuous connection to actual rainforest salvation.

The National Rainforest Conservation Program—NRCP

Very soon after the extent, variety and vulnerability of Australia's rainforest mosaic became scientifically evident, the Government moved to cast a protective screen over this valuable national resource.

In 1986, it announced its primary weapon against further degradation as the NRCP by allocating $22.25 million not only to preserve rainforests, but also to conserve them in a way that took account of their ecological, genetic, cultural, natural heritage, scientific, economic and recreational values.

The Program arose out of the recognition that diminishing rainforests had been the cause of much friction across all levels of society in previous years. Without an agreed strategy, confrontations between economic–health and environmental–welfare proponents were likely to continue.

One result of this realisation was the conference which the Government convened in Cairns in 1984 to uncover the range of community attitudes towards conservation of our tropical and subtropical rainforests. By recognising the need for rainforest protection through Commonwealth policy, the meeting clearly demonstrated that a cooperative approach to rainforest sustainability was indeed possible.

The outcome of this was a Working Party comprising officers from most State and Federal environmental agencies, together with representatives from the relevant peer groups from the private sector. The Group presented its landmark report—a crystallisation of previously disparate and intractable viewpoints—in September 1985. Here, for the first time in matters of rainforest protection, the Government had an agenda of possible and practical policy options that could be undertaken. This was the sapling from which the National Rainforest Conservation Program grew.

Through the Program, the Government wanted to engender specially-funded projects involving research, surveys, rehabilitation, land acquisition, visitor centres and public information.

With the participation of Queensland in 1990, the Program now covers all Australian States and Territories, including external Territories. The projects range from the large-scale to the small-scale, from involving a local community in conserving local rainforest patches to studying the interaction between flying foxes and the rainforests, from boardwalks for the disabled to major educational information centres.

Almost 200 projects have been funded since the establishment of the Program, and of them, perhaps the saving of the rainforest patch within the limits of the town of Robertson, New South Wales, might be most typical.

The saving of Robertson's rainforest

Robertson is a small town in the Illawarra region of New South Wales. It is a proud and elegant centre, visited by many people each year, and not the least for its potatoes, cheese and pie shop.

Within the actual town limits is a small five hectare patch of rainforest, called Robertson Nature Reserve, which, together with a few other patches on nearby private land, is all that is left of a once extensive 2,500 hectare stretch of both warm and cool temperate rainforests, known as the Yarrawa Brush.

With the funding help of the NRCP, the NSW National Parks and Wildlife Service got together with the local people to form a bush regeneration group within the town. The primary object of the group was to save the central remaining section and to encourage the local land owners to take measures for the other remnants against grazing and exotic-weed depredations.

Meeting regularly to plan, to weed and to carefully restore the degraded areas of the reserve, the group managed to turn around the catabolism of this isolated rainforest remnant to such an extent that, in 1989, they won the coveted 'natural areas managed by Government Authority' section in the State's Tidy Towns Competition.

The cooperation at all levels proved such a success that the NRCP gave further funding to enable access and education of the reserve for all people. A 600 metre loop track was installed with wheelchair access in mind; then interpretative signs were posted and leaflets printed to explain the natural features. Nor did the group forget the importance of the landowners; for them, it produced a pamphlet on the best ways to regenerate their rainforest islands.

The loss of the Yarrawa Brush has been averted.

Of course, it matters that only a small proportion of its one-time glory stands as its monument. But that is better than nothing. The little that is left is also a monument to the changing social attitudes that now put a high priority on avoiding the destruction, or at worse, the impassive neglect, of our land's living bounty of rainforests.

And that, with due governing equilibrium, is what the National Rainforest Conservation Program, as a major national conservation tool, exemplifies.

5

PHYSICAL GEOGRAPHY AND CLIMATE OF AUSTRALIA

This chapter is concerned with the physical geography of Australia and Australia's climate. Detailed climatic data for each capital city are included at the end of the chapter.

Geography of Australia

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 is about 3,180 kilometres, while the latitudinal distance between Cape York and South East Cape, Tasmania, is 3,680 kilometres. The longitudinal distance between Steep Point and Cape Byron is about 4,000 kilometres.

Area of Australia compared with 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 USSR) 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
('000 square kilometres)

Country	*Area*	*Country*	*Area*
Continental divisions—		Canada	9,976
Europe*(a)*	4,936	China	9,590
Asia*(a)*	27,532	Germany, Federal Republic of*(b)*	357
USSR (Europe and Asia)	22,402	India	3,288
Africa	30,319	Indonesia	1,919
North and Central America and West Indies	24,247	Japan	372
South America	17,834	Papua New Guinea	462
Oceania	8,504	New Zealand	269
		United Kingdom	244
Country—		United States of America	9,363
Australia	7,682		
Brazil	8,512	**Total, land mass excluding Arctic and Antarctic continents**	**135,774**

(a) Excludes USSR, shown below. *(b)* Includes German Democratic Republic.

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 lake 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 then 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 kilometre. 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.

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

	Estimated area			*Percentage of total area*		*Standard times*	
State or Territory	*Total*	*Percentage of total area*	*Length of coastline*	*Tropical zone*	*Temperate zone*	*Meridian selected*	*Ahead of GMT(a)*
	km^2		km				hours
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
Australia	**7,682,300**	**100.00**	**36,735**	**39**	**61**	..	..

(a) Greenwich Mean Time. *(b)* For States with 'daylight saving' an hour should be added for this period.

Climate of Australia

Introduction

The island continent of Australia features a wide range of climatic zones, from the tropical regions of the north, the arid expanses of the interior, to the temperate regions of the south.

Widely known as 'The Dry Continent', the land mass is relatively arid, with 80 per cent having a median rainfall less than 600 millimetres per year and 50 per cent less than 300 millimetres. Seasonal fluctuations can be great, with temperatures ranging from above 50°C to well below zero. However, 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 the surrounding oceans.

Although the climate can be described as predominantly continental, the insular nature of the land mass produces modifications to the general continental pattern.

Australia can be host to any of nature's disasters, particularly droughts, floods, tropical cyclones, severe storms and bushfires.

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 travelling over the Southern Ocean have a controlling influence on the climate of southern Australia during the winter season, causing rainy periods. Periodic north-west cloud bands in the upper levels of the atmosphere over the continent may interact with southern systems to produce rainfall episodes, particularly over eastern areas. 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 large 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 more 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. Southward dips of the monsoonal low pressure trough sometimes spawn tropical depressions, and may prolong rainy conditions over northern Australia for episodes up to three weeks at a time.

Tropical cyclones develop over the seas around northern Australia in summer between November and April. Their frequency of occurrence and the tracks they follow vary greatly from season to season. On 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 and high winds in coastal areas. Some cyclones move inland, losing intensity but still producing widespread heavy rainfall.

Rainfall

Annual

The annual 10, 50 and 90 percentile* rainfall maps are shown on Figures 1, 2 and 3 respectively. The area of lowest rainfall is in the vicinity of Lake Eyre in South Australia, where the median (50 percentile) 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 cause 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 4,048 millimetres (63 years to 1987 inclusive). The mountainous region of western Tasmania also has a high annual rainfall, with Lake Margaret having a median of 3,565 millimetres (76 years to 1987 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.

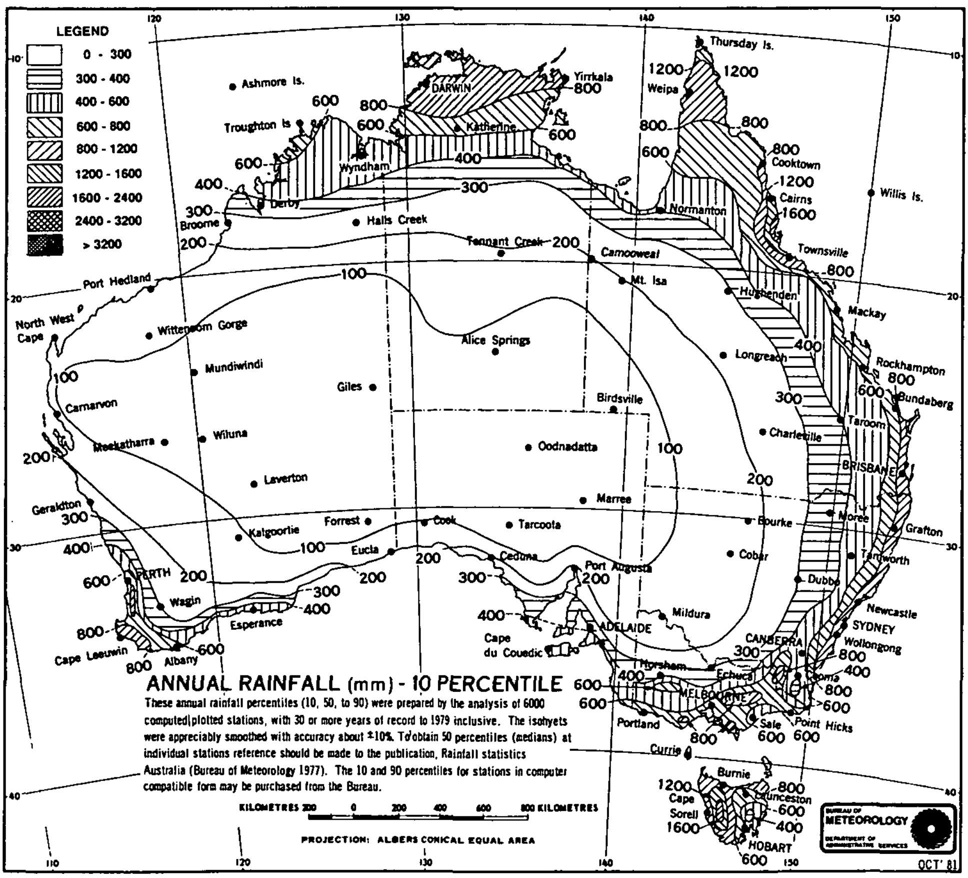


FIGURE 1

*The amounts that are not exceeded by 10, 50 and 90 per cent of all recordings are the 10, 50 and 90 percentiles or the first, fifth and ninth deciles respectively. The 50 percentile is usually called the median.

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 distribution of median annual rainfall.

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

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

(a) Includes Australian Capital Territory.

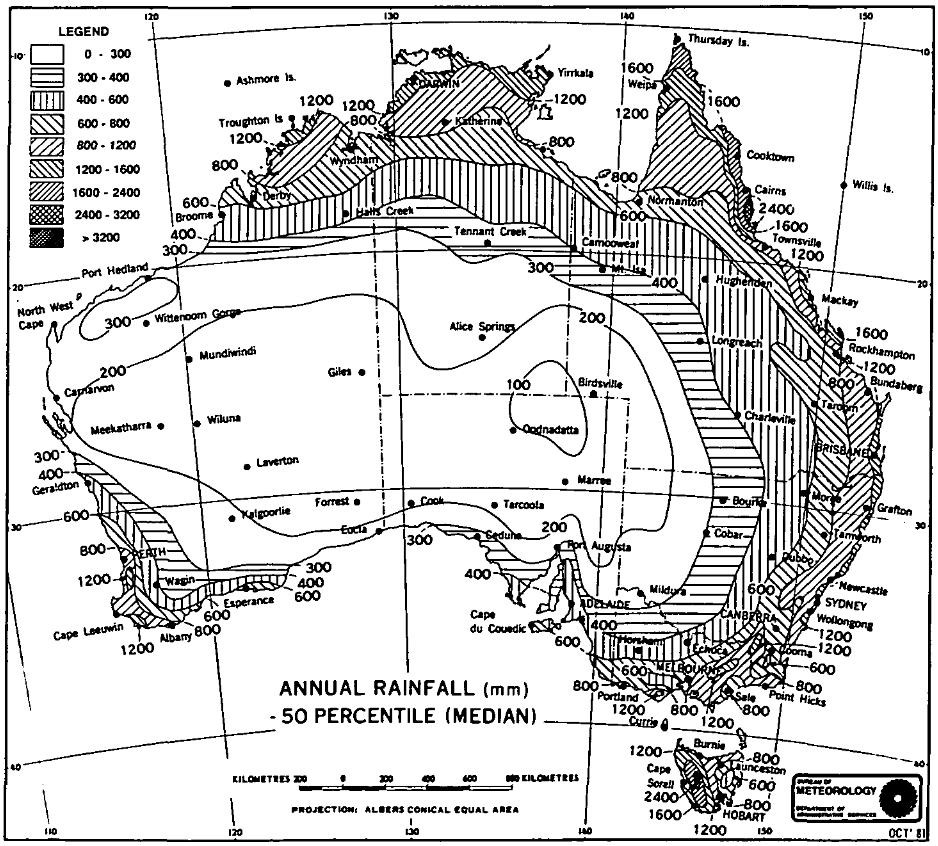


FIGURE 2

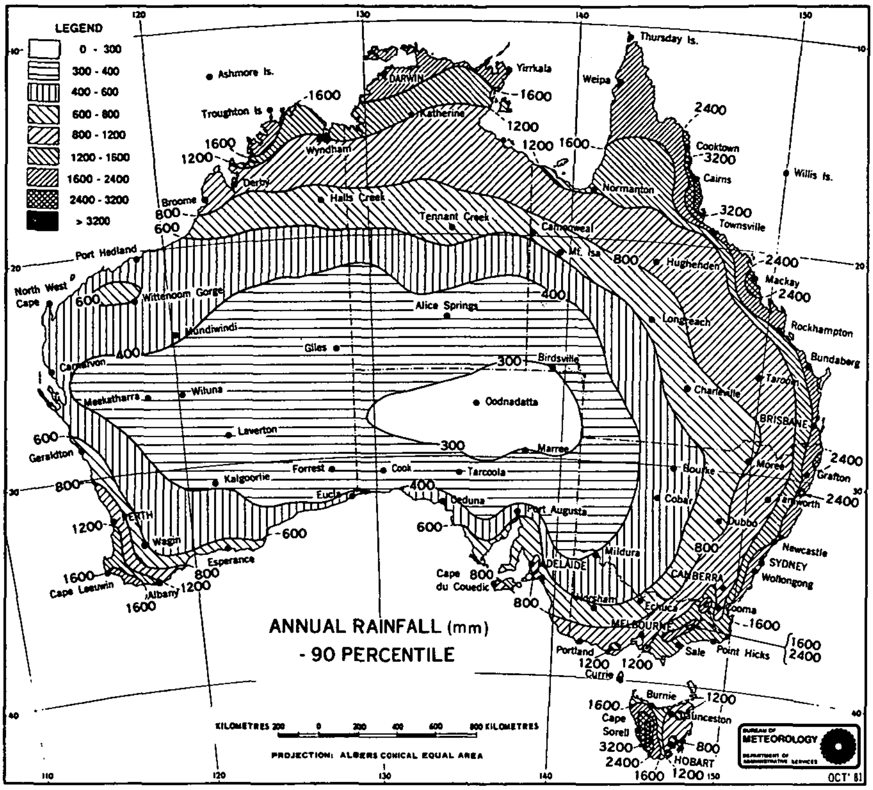


FIGURE 3

Seasonal

As outlined above, the rainfall pattern of Australia 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. Figure 4 is a reduced version of the seasonal rainfall zones arising from this classification (*see* Bureau of Meteorology publication *Climatic Atlas of Australia,* 1988).

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:

- marked wet summer and dry winter of northern Australia;
- wet summer and relatively dry winter of south-eastern Queensland and north-eastern New South Wales;
- uniform rainfall in south-eastern Australia—much of New South Wales, parts of eastern Victoria and southern Tasmania;
- marked wet winter and dry summer of south-west Western Australia and, to a lesser extent, much of the remainder of southern Australia directly influenced by westerly circulation; and

- arid area comprising about half 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.

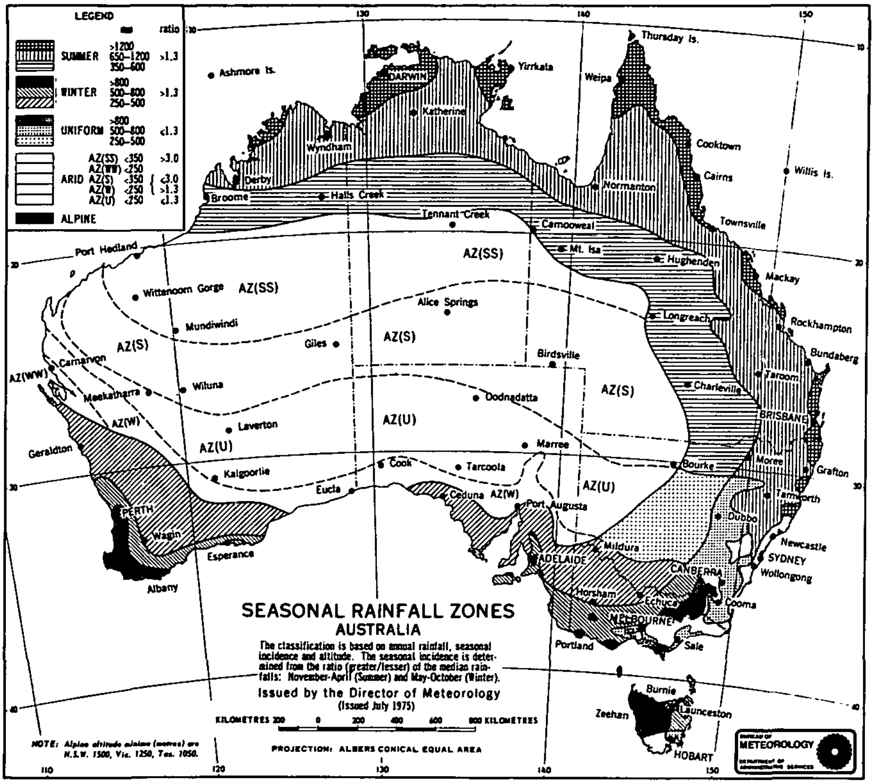


FIGURE 4

The seasonal rainfall classification (*Climatic Atlas of Australia*, 1988) can be further reduced to provide a simplified distribution of seven climatic zones as shown in Figure 5.

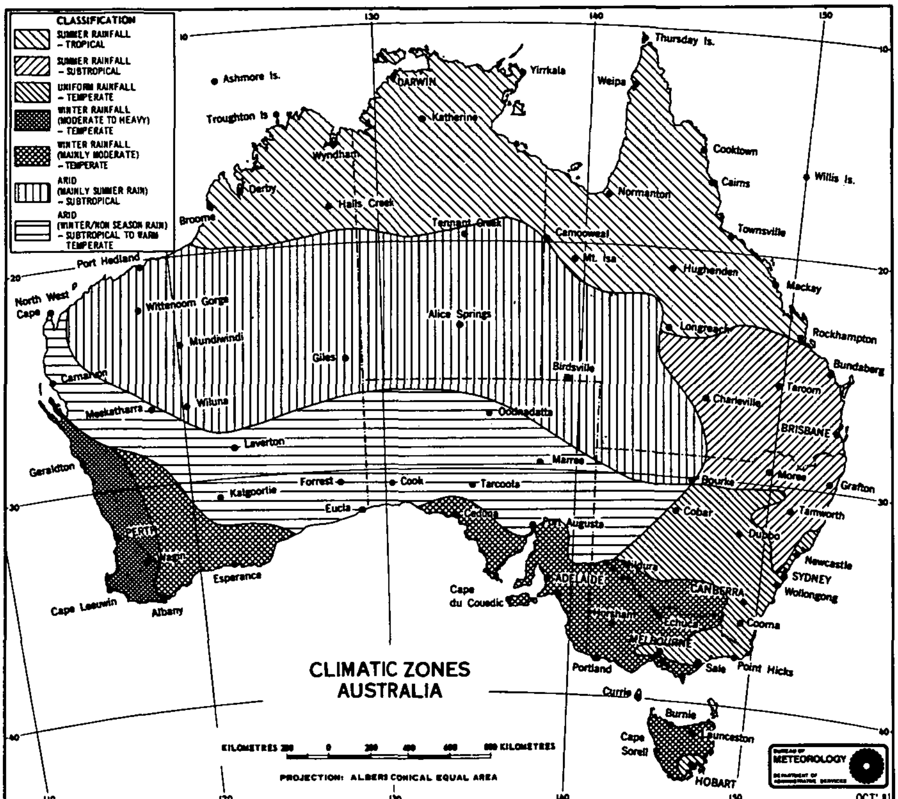
Variability

The adequate presentation of rainfall variability over an extensive geographical area is difficult. Probably the best measures are found in tables compiled for a number of individual stations in some of the Climatic Survey districts. These tables show the percentage chances of receiving specified amounts of rainfall in monthly, seasonal or annual time spans. Statistical indices of rainfall variation based on several techniques have been used to compile maps showing main features of the variability of annual rainfall over Australia.

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):

$$\text{i.e. Variability Index} = \left\{ \frac{90\text{–}10}{50} \right\} \text{ percentiles.}$$

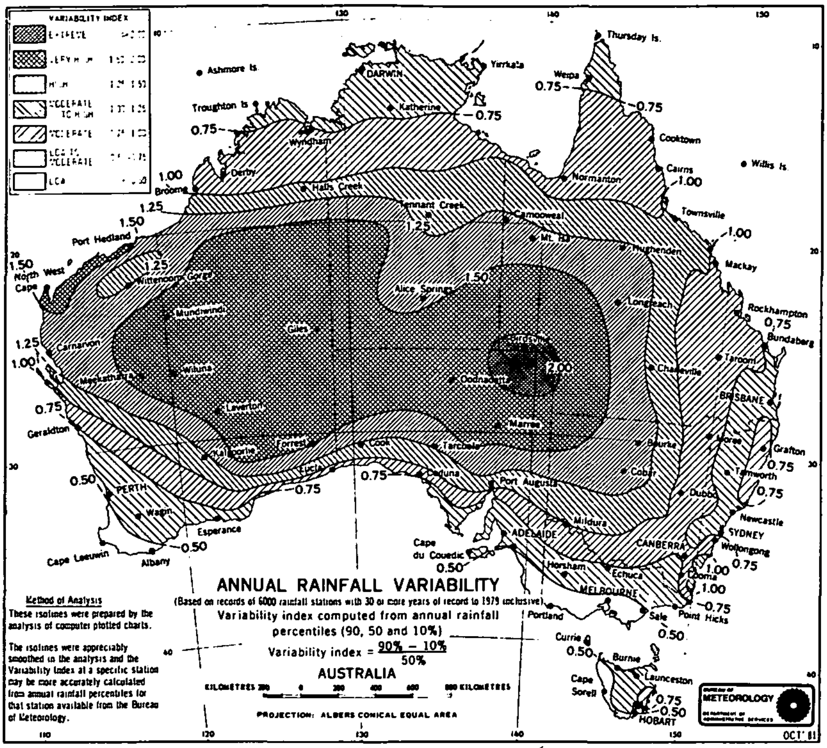
Variability based on this relationship (Gaffney 1975 and Lee and Gaffney 1986) is shown in Figure 6. The region of high to extreme variability shown in Figure 6 lies mostly in the arid zones with summer rainfall incidence, AZ (S) defined on Figure 4. In the winter rainfall zones, the variability is generally 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.

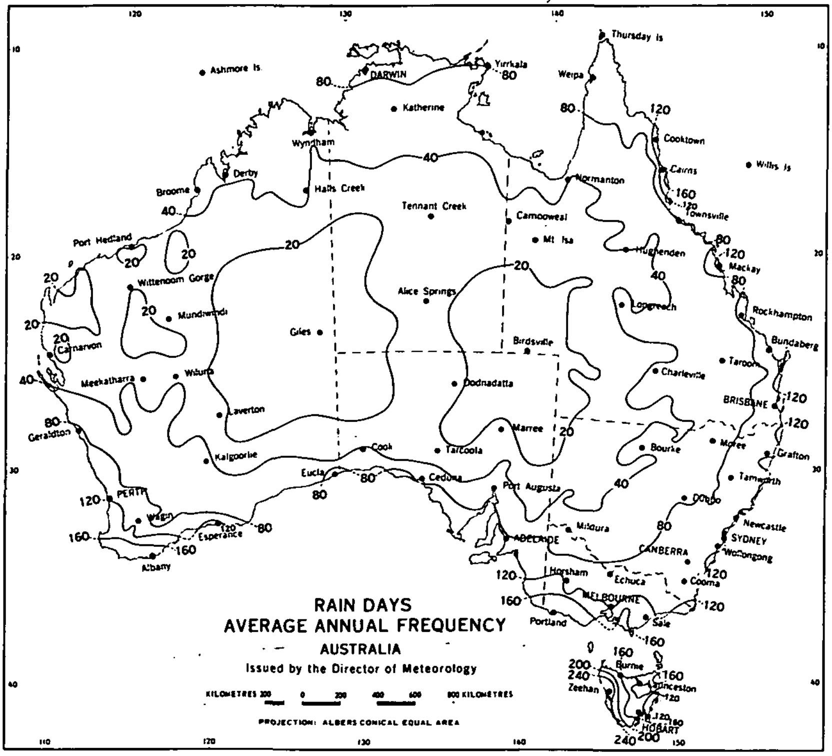


CLASSIFICATION	SEASONAL CHARACTERISTICS SUMMER	SEASONAL CHARACTERISTICS WINTER
Summer Rainfall - Tropical	Heavy periodic rains (heavier in coastal & highland areas) Hot generally *Humid in coastal areas*	Generally rainless Mild to warm Dry
Summer Rainfall - Subtropical	Heavy periodic rains (heavier in coastal & highland areas) Mainly hot Humid in highlands & coastal areas	Some significant rain Mild
Uniform Rainfall - Temperate	Mainly reliable rain Warm to hot	Mainly reliable rain Cool to cold
Winter Rainfall (moderate to heavy) - Temperate	Irregular rain, mostly light Warm to hot	Reliable rain (moderate to heavy) Cool to mild
Winter Rainfall (mainly moderate) - Temperate	Mostly light irregular rain Warm to hot	Reliable rain (mainly moderate) Cool to cold
Arid (mainly summer rain) - Subtropical	Variably rain Hot to extreme Very dry	Mainly irregular light rain Mild to warm Dry
Arid (winter or non-seasonal rain) - Warm Temperate to Subtropical	Very irregular rain Hot to extreme Very dry	Variable rain, mainly light Cool to mild Dry

[Reference:- Climatic Atlas of Australia, Map set 5, Bureau of Meteorology 1975]

FIGURE 5





FIGURES 6 AND 7

Variability of rainfall in eastern Australia is strongly linked to the Southern Oscillation, a seesawing of atmospheric pressure between the central/eastern Pacific and the western Indian oceans. The strength of the Southern Oscillation is determined by the Southern Oscillation Index (SOI) which is a measure of the difference in sea level atmospheric pressure between Tahiti in the central Pacific and Darwin, northern Australia. High SOI values relate to above average rainfall over eastern Australia, and low SOI values relate to below average rainfall over the area. The table below illustrates the significance of this SOI/rainfall relationship.

Southern Oscillation Index—eastern Australian rainfall relationship

AVERAGE AREA OF EASTERN AUSTRALIA(a) WITH ANNUAL RAINFALL IN SPECIFIED RANGES BY SOI RANGE

SOI range	*Number of years (1933–87)*	*Average SOI*	*Percentage of area within percentile limits*		
			≤30 percentile	*31–70 percentile*	*>70 percentile*
<–10	6	–13.5	63.1	30.5	6.4
–5 to –10	8	–6.5	33.9	47.3	18.8
0 to –5	11	–1.7	28.5	50.7	20.8
+5 to 0	19	1.8	26.2	42.8	31.0
+10 to +5	5	5.9	9.5	53.7	36.8
>+10	6	11.9	3.0	25.6	71.4

(a) Queensland, New South Wales, Victoria and Tasmania.

Rainday frequency

The average number of days per year with rainfall of 0.2 millimetres or more is shown in Figure 7.

The frequency of raindays exceeds 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 raindays 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 raindays per year. In the high rainfall areas of northern Australia the number of raindays is about 80 per year, but heavier falls occur in this region than in southern regions.

Intensity

The highest rainfall intensities for some localities are shown in the table below.

HIGHEST RAINFALL INTENSITIES IN SPECIFIED PERIODS
(millimetres)
(*Source:* Pluviograph records in Bureau of Meteorology archives)

Station	*Period of record*	*Years of complete records*	*Period in hours* 1	3	6	12	24
			mm	mm	mm	mm	mm
Adelaide	1897–1979	79	69	133	141	141	141
Alice Springs	1951–1986	36	75	87	108	133	150
Brisbane	1911–1987	77	88	142	182	266	327
Broome	1948–1983	36	112	157	185	313	353
Canberra	1938–1982	37	40	57	67	76	120
Carnarvon	1956–1982	27	44	63	83	95	108
Charleville	1953–1987	35	42	66	75	111	142
Cloncurry	1953–1981	23	59	118	164	173	204
Darwin (Airport)	1953–1987	35	89	138	214	260	291
Esperance	1963–1979	15	23	45	62	68	79
Hobart	1911–1985	75	28	56	87	117	168
Meekatharra	1953–1982	30	33	67	81	99	112
Melbourne	1873–1986	100	76	83	86	97	130
Mildura	1953–1986	34	49	60	65	66	91
Perth	1946–1983	37	31	37	48	64	80
Sydney	1913–1987	71	118	194	200	244	340
Townsville	1953–1987	34	88	158	235	296	319

These figures represent intensities over only small areas around the recording points because turbulence and exposure characteristics of the measuring gauge may vary over a distance of a few metres. The highest 24-hour (9 a.m. to 9 a.m.) falls are listed below. Most of the very high 24-hour falls (above 700 millimetres) have occurred in the coastal strip of Queensland, where a tropical cyclone moving close to mountainous terrain provides ideal conditions for spectacular falls.

HIGHEST DAILY RAINFALLS
(All years to date)

State	*Station*	*Date*	*Amount*
			mm
New South Wales	Dorrigo (Myrtle Street)	21.2.1954	809
	Lowanna (Yalamurra)	22.4.1974	662
Victoria	Tanybryn	22.3.1983	375
	Nowa Nowa (Wairawa)	11.3.1906	275
Queensland*(a)*	Beerwah (Crohamhurst)	3.2.1893	907
	Finch Hatton PO	18.2.1958	878
South Australia	Stansbury	18.2.1946	222
	Wirrabara Forest Reserve	4.6.1978	222
Western Australia	Roebourne (Whim Creek)	3.4.1898	747
	Broome (Kilto)	4.12.1970	635
Tasmania	Cullenswood	22.3.1974	352
	Mathinna	5.4.1929	337
Northern Territory	Roper Valley Station	15.4.1963	545
	Angurugu (Groote Eylandt)	28.3.1953	513

(a) Bellenden Ker (Top Station) has recorded a 24 hour total of 960 mm from 3 p.m. to 3 p.m. on the 3rd and 4th January 1979. The standard daily rainfall period is 9 a.m. to 9 a.m.

The highest annual rainfalls are listed by State in the following table.

HIGHEST ANNUAL RAINFALLS
(All years to date)

State	*Station*	*Year*	*Amount*
			mm
New South Wales	Tallowwood Point	1950	4,540
Victoria	Falls Creek SEC	1956	3,739
Queensland	Bellenden Ker (Top Station)	1979	11,251
South Australia	Aldgate State School	1917	1,853
Western Australia	Armadale (Jarrahdale PO)	1917	2,169
Tasmania	Lake Margaret	1948	4,504
Northern Territory	Elizabeth Downs	1973	2,966

Thunderstorms and hail

A thunderday at a given location is a calendar day on which thunder is heard at least once. Figure 8 shows isopleths (isobronts) of the average annual number of thunderdays which vary from 74 per year near Darwin to less than 10 per year over parts of the southern regions. Convectional processes during the summer wet season cause high thunderstorm incidence in northern Australia. The generally high incidence of thunderdays (40–60 annually) over the eastern upland areas is caused mainly by orographic uplift of moist air streams.

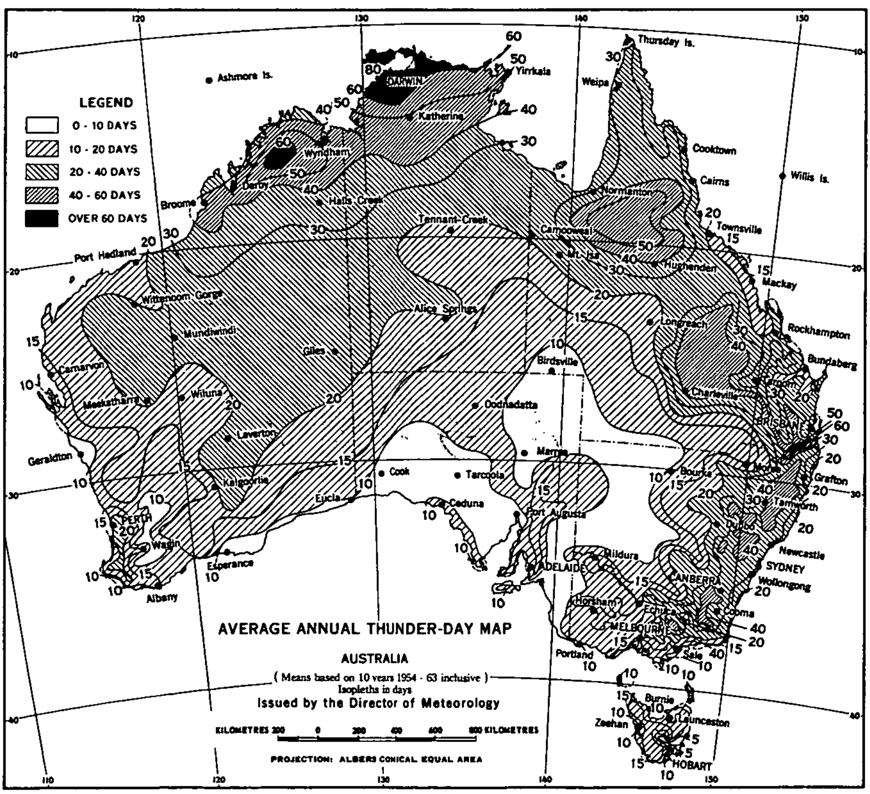


FIGURE 8

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). Large hail capable of piercing light gauge galvanised iron occurs at irregular intervals and sometimes causes 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 fairly frequently above 1,000 metres in these seasons. The area, depth and duration are highly variable. In some years, snow falls in the altitude range of 500–1,000 metres. 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 have been covered with snow for several weeks. In ravines around Mount Kosciusko (2,228 metres) small areas of snow may persist through summer but there are no permanent snowfields.

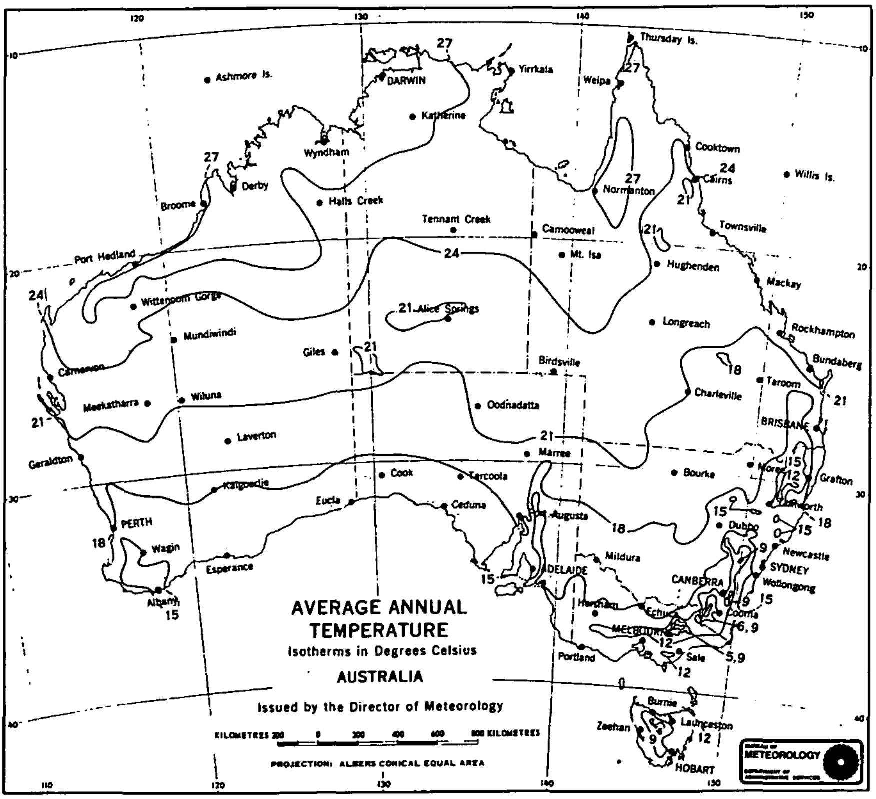


FIGURE 9

Temperature

Average temperatures

Average annual air temperatures, as shown in Figure 9, 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 temperatures for the months of January and July are shown in Figures 10 to 13 inclusive.

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 in 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.

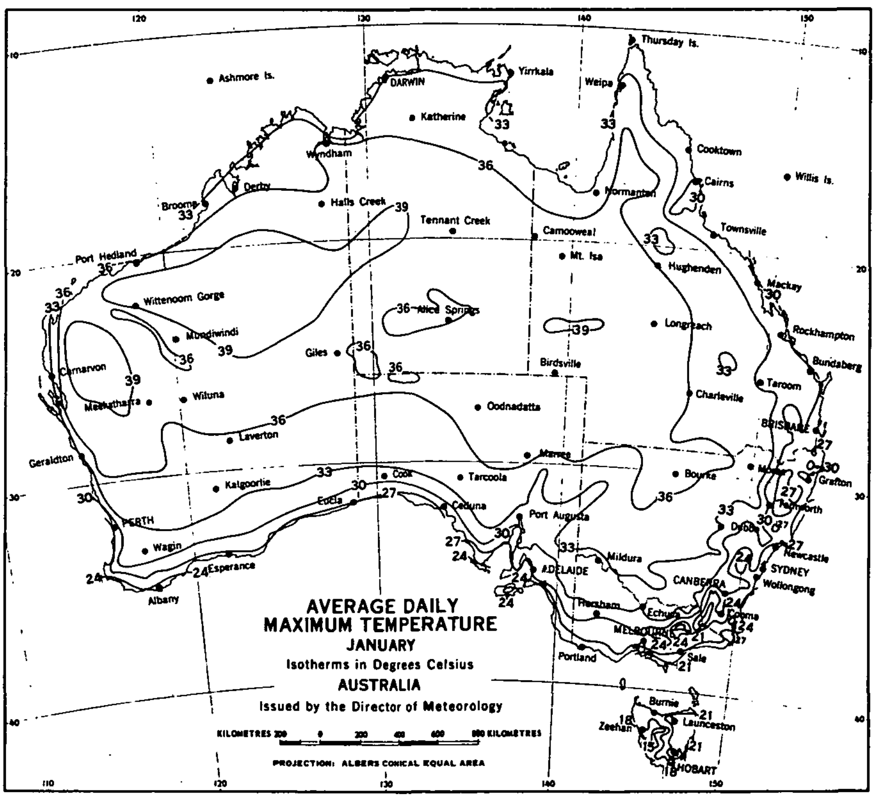
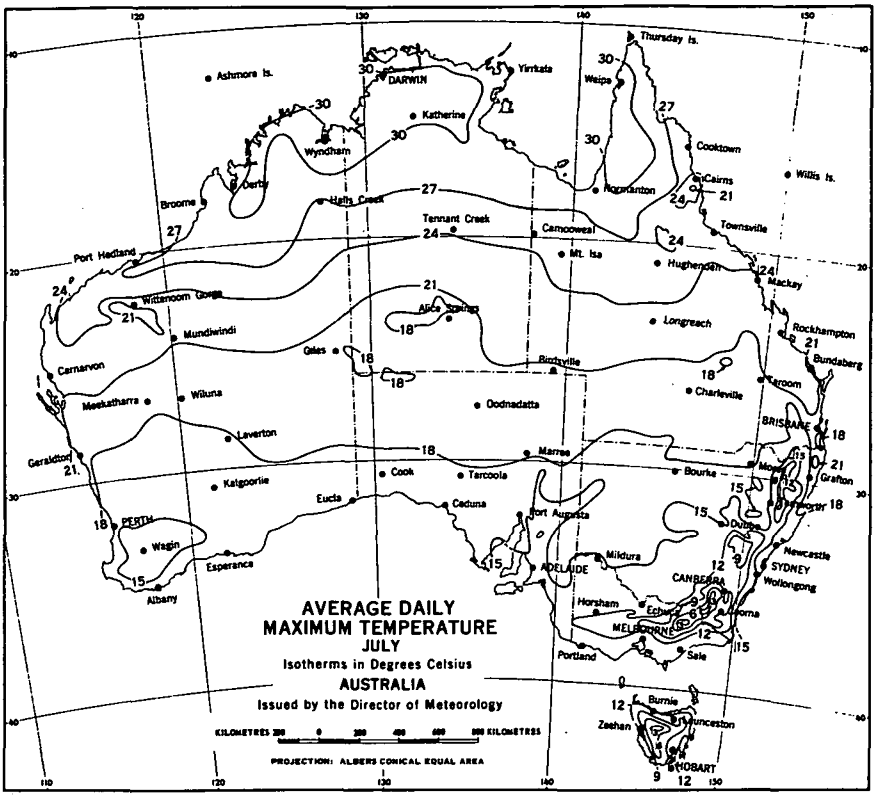
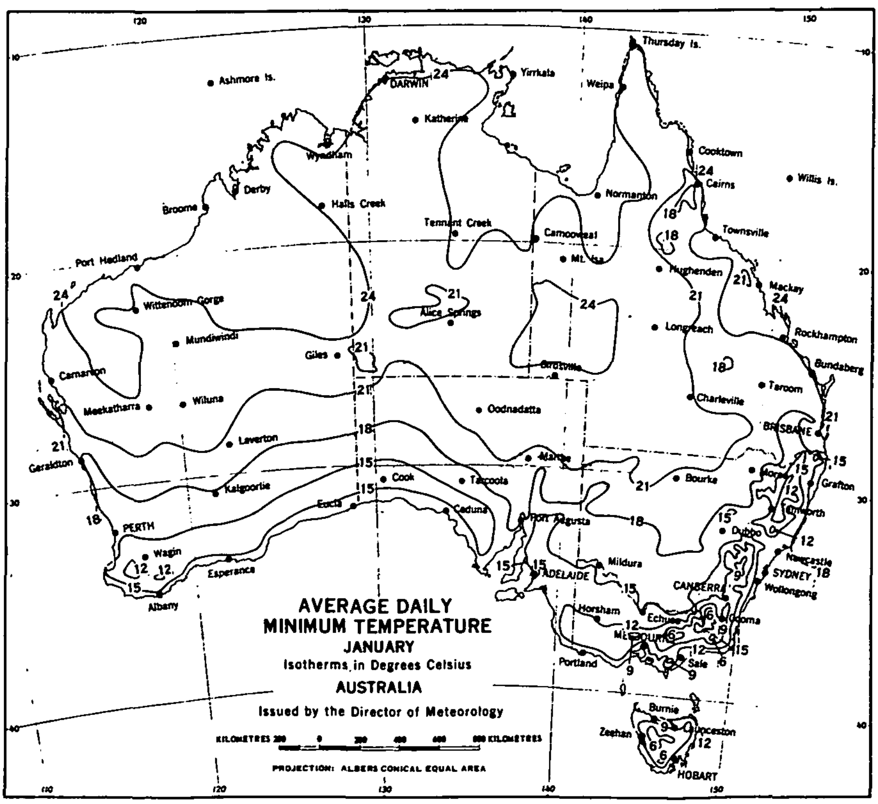


FIGURE 10





FIGURES 11 AND 12

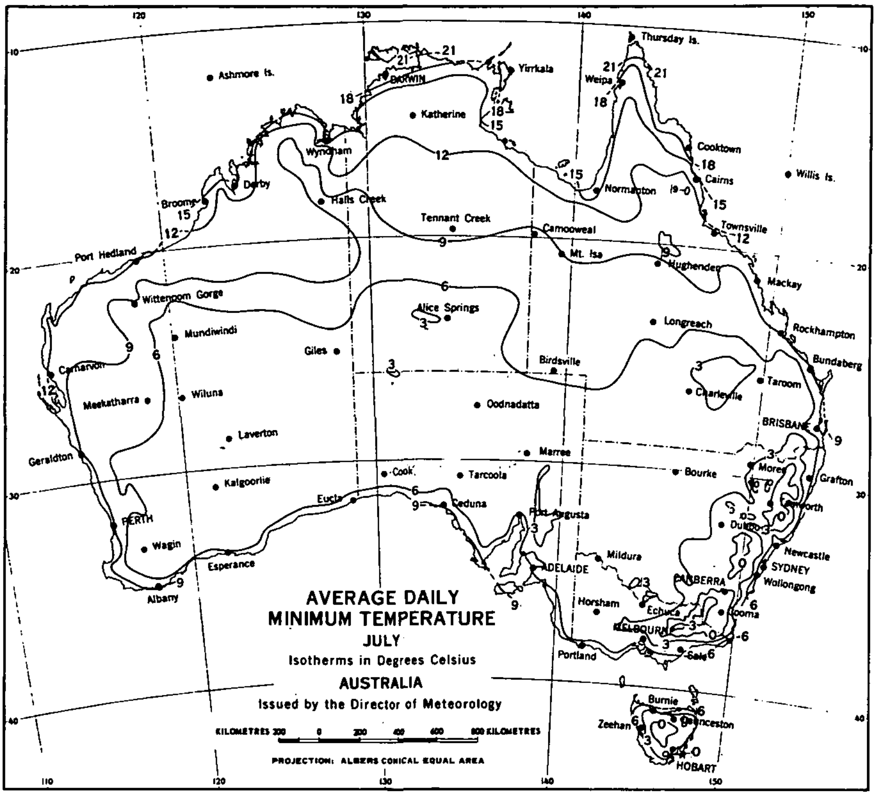


FIGURE 13

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 discontinuties 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-west 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.

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.

EXTREME MAXIMUM TEMPERATURES
(All years to date)

Station	*°C*	*Date*	*Station*	*°C*	*Date*
New South Wales—			Western Australia—		
Bourke	52.8	17.1.1877	Eucla	50.7	22.1.1906
Wilcannia	50.0	11.1.1939	Mundrabilla	49.8	3.1.1979
Menindee	49.7	10.1.1939	Forrest	49.8	13.1.1979
Victoria—			Madura	49.4	7.1.1971
Mildura	50.8	6.1.1906	Tasmania—		
Swan Hill	49.4	18.1.1906	Bushy Park	40.8	26.12.1945
Queensland—			Hobart	40.8	4.1.1976
Cloncurry	53.1	16.1.1889	Northern Territory—		
Winton	50.7	14.12.1888	Finke	48.3	2.1.1960
Birdsville	49.5	24.12.1972	Jervois	47.5	3.1.1978
South Australia—			Australian Capital Territory—		
Oodnadatta	50.7	2.1.1960	Canberra (Acton)	42.8	11.1.1939
Marree	49.4	2.1.1960			
Whyalla	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°C on 14 July 1945 and 22 August 1947. Temperatures have fallen below −5°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 temperature of −4.3°C has been recorded, and at Swansea, on the east coast of Tasmania, the temperature has fallen as low as −5.0°C.

In the tropics, extreme minima below 0°C have been recorded at many places away from the coasts—as far north as Herberton, Queensland (−5.0°C). Even very close to the tropical coastline, temperatures have fallen to 0°C, a low recording being −0.8°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 date)

Station	*°C*	*Date*	*Station*	*°C*	*Date*
New South Wales—			Western Australia—		
Charlotte Pass	−22.2	14.7.1945	Booylgoo Springs	−6.7	12.7.1969
		22.8.1947	Wandering	−5.7	1.6.1964
Kiandra	−20.6	2.8.1929	Tasmania—		
Perisher Valley	−19.5	23.7.1979	Shannon	−13.0	30.6.1983
Victoria—			Butlers Gorge	−13.0	30.6.1983
Mount Hotham	−12.8	30.7.1931	Tarraleah	−13.0	30.6.1983
Omeo	−11.7	15.6.1965	Northern Territory—		
Hotham Heights	−11.1	15.8.1968	Alice Springs	−7.5	12.7.1976
Queensland—			Tempe Downs	−6.9	24.7.1971
Stanthorpe	−11.0	4.7.1895	Australian Capital Territory—		
Warwick	−10.6	12.7.1965	Gudgenby	−14.6	11.7.1971
Mitchell	−9.4	15.8.1979			
South Australia—					
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°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-west 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°C (100°F) have been recorded on as many as 161 consecutive days (30 October 1923 to 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°C on the 12th, Melbourne a record of 45.6°C on the 13th and Sydney a record of 45.3°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 35.6°C.

Frost

Frost can cause serious losses of agricultural crops, and numerous climatic studies have been made in Australia relating to specific crops cultivated in local areas.

Under calm conditions, overnight temperatures at ground level are often as much as 5°C lower than those measured in the instrument screen (base height 1.1 metre) and differences of 10°C have been recorded. Only a small number of stations measure minima at ground level, the lowest recordings being −15.1°C at Canberra and −11.0°C at Stanthorpe (Queensland). Lower readings may be recorded in alpine areas.

Frost frequency depends on location and orography, and even on minor variations in the contour of the land. The parts of Australia which are most subject to frost are the eastern uplands from north-eastern Victoria to the western Darling Downs in southern Queensland. Most stations in this region experience more than ten nights a month with readings of 0°C (or under) for three to five months of the year. On Tasmania's Central Plateau similar conditions occur for three to six months of the year. Frosts may occur within a few miles of the coasts except in the Northern Territory and most of the north Queensland coasts.

Regions in which frosts may occur at any time of the year comprise most of Tasmania, large areas of the tablelands of New South Wales, much of inland Victoria, particularly the north-east, and a small part of the extreme south-west of Western Australia. Over most of the interior of the continent, and on the highlands of Queensland as far north as the Atherton Plateau, frosts commence in April and end in September. Minimum temperatures below 0°C are experienced in most of the subtropical interior in June and July.

The length of the frost period for the year is taken as the number of days between the first and last recording of an air temperature of 2°C or less. The median duration of the frost period in days per year is shown in Figure 14.

The median frost period over the continent varies from over 200 days per year in the south-eastern uplands areas south of the Hunter Valley, to zero days in northern Australia. In the southern regions of the continent, the annual frost period generally decreases from about 100 days inland to below 50 days towards the coast. However, there are appreciable spatial variations depending mainly on local orography. In Tasmania the frost period exceeds 300 days on the uplands and decreases to 100 days near the coast.

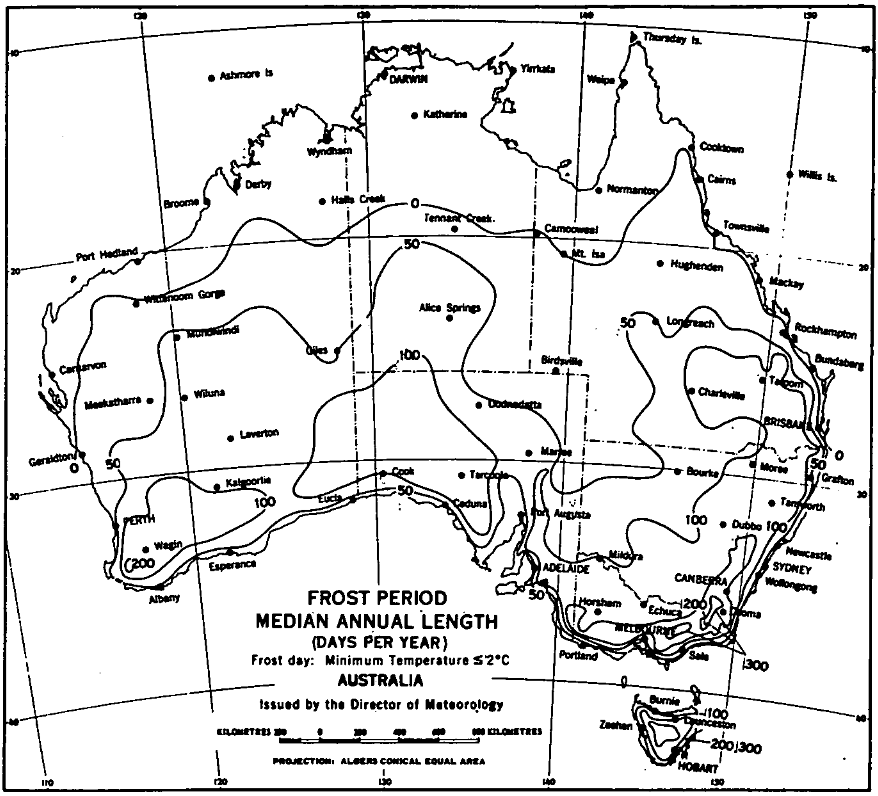


FIGURE 14

More strictly, a frost is taken as corresponding to a minimum screen temperature of 2.2°C or less. A light frost is said to occur when the screen minimum temperature is greater than 0°C but less than or equal to 2.2°C. A heavy frost corresponds to a minimum temperature of 0°C or less.

The table below includes the average annual frequency of minima of 2.2°C or less for a wide selection of stations, particularly those prone to frosts. These data show the high spatial variability of frost frequency across Australia. The south-eastern alpine areas, as represented by Kiandra (elevation 1,400 metres), have a frequency exceeding 200. At Kalgoorlie the average annual frequency is 20.4 days, at Alice Springs 32.7, Charleville 32.3, Canberra 101.1 and Essendon Airport (Melbourne) 14.2.

FROST FREQUENCY

Station	Period of record	Altitude (metres)	Average number of frosty nights ≤2.2°C	Average number of heavy frosts ≤0°C
Adelaide Airport	1956–85	6.0	6.2	0.9
Alice Springs	1942–85	545.0	32.7	11.9
Ballan	1957–68	442.0	62.3	20.5
Birdsville	1957–83	43.0	4.7	0.4
Brisbane Airport	1950–85	6.0	0.2	0.0
Canberra Airport	1940–85	571.0	101.1	63.6
Ceduna Airport	1943–85	24.0	18.4	4.2
Charleville Airport	1943–85	306.0	32.3	12.9
Essendon Airport (Melbourne)	1940–70	86.0	14.2	2.6
Hobart	1949–85	55.2	17.1	1.7
Kalgoorlie Airport	1943–84	360.0	20.4	4.6
Kiandra	1957–68	1,395.4	228.3	176.7
Mount Gambier Airport	1943–85	63.0	26.0	6.9
Perth Airport	1945–86	20.0	2.8	0.1
Walgett	1957–84	131.0	23.3	5.7

NOTE: ≤ denotes less than or equal to.

The regions of mainland Australia most prone to heavy frosts are the eastern uplands and adjacent areas extending from Victoria through New South Wales to south-eastern Queensland. Stations above 1,000 metres in altitude in the southern parts of these uplands have more than 100 heavy frosts annually, and in the upland areas below 1,000 metres the annual frequency ranges from 100 to about 20. Over the remainder of southern Queensland, New South Wales and Victoria, although there are great spatial variations, the average annual frequency of heavy frosts typically ranges from about 20 inland to 10 towards the coast.

In Tasmania, uplands above 1,000 metres have more than 100 heavy frosts annually and, in neighbouring areas, the frequency is about 100 decreasing to 20 towards the coasts. Even some coastal stations have a relatively high frequency (Swansea, for example, has 15.7).

The southern half of Western Australia, the whole of South Australia, and the Alice Springs district of the Northern Territory experience heavy frosts. Differences in annual frequencies between places are great but in general the frequency is about 10 inland decreasing towards the coasts. Some places average more than 20 heavy frosts annually, notably Wandering, Western Australia (21.5) and Yongala, South Australia (41.8). At Alice Springs the annual average frequency is 11.9.

Humidity

Australia is a dry continent in terms of the water vapour content or humidity of the air and this element may be compared with evaporation to which it is related. 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, the most commonly known being 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 average is at a maximum in the early morning when air temperature is minimal.

Relative humidity isopleths for January and July at 9 a.m. and 3 p.m. shown in Figures 15–18 are extracted from the *Climatic Atlas of Australia, 1988.*

The main features of the relative humidity pattern are:

- over the interior of the continent there is a marked dryness during most of the year, notably towards the northern coast in the dry season (May–October);
- the coastal fringes are comparatively moist, although this is less evident along the north-west coast of Western Australia where continental effects are marked;
- in northern Australia, the highest values occur during the summer wet season (December–February) and the lowest during the winter dry season(June–August); and
- in most of southern Australia the highest values are experienced in the winter rainy season (June–August) and the lowest in summer (December–February)

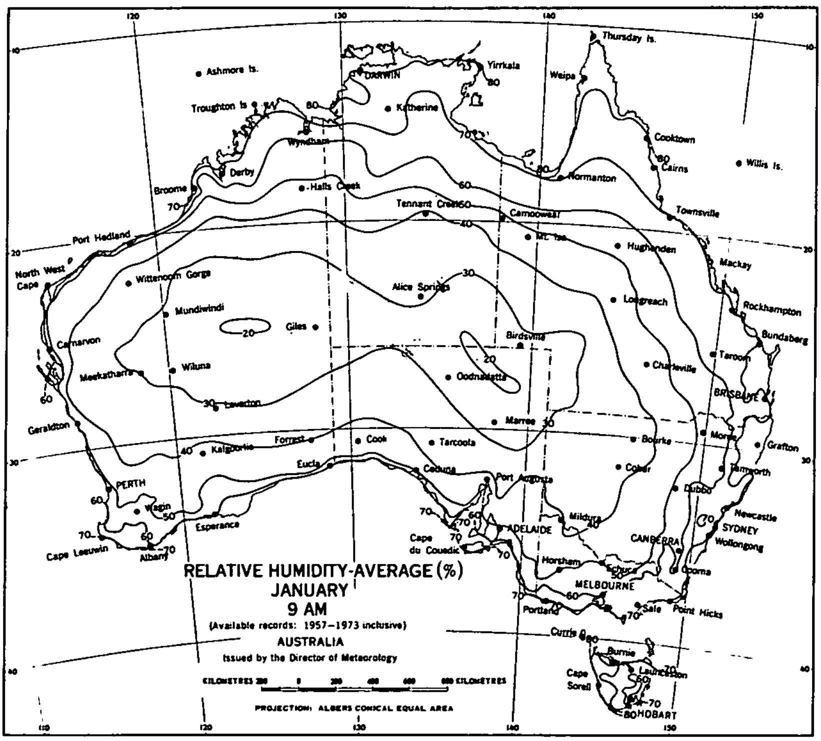
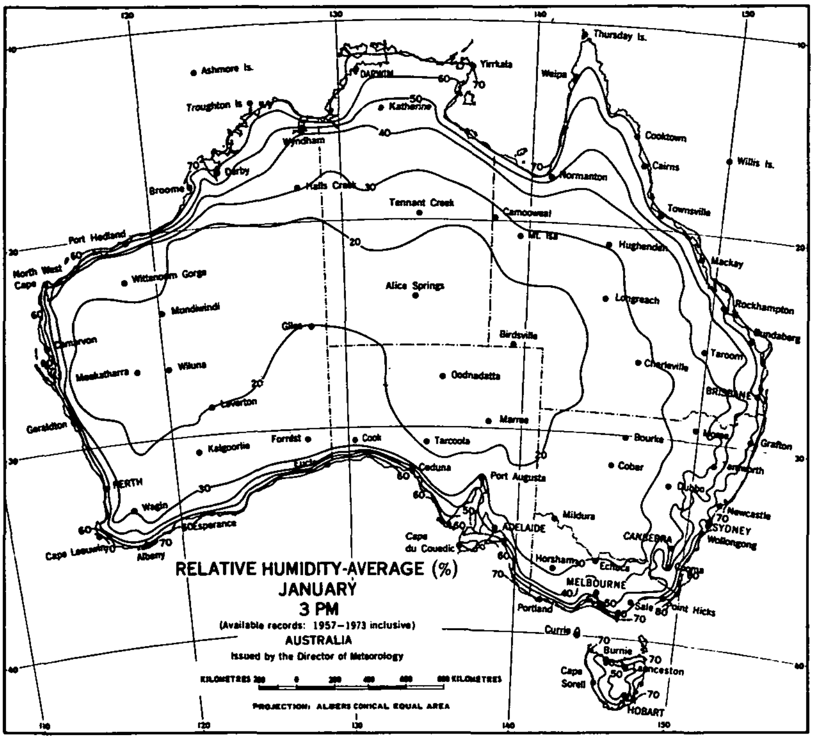
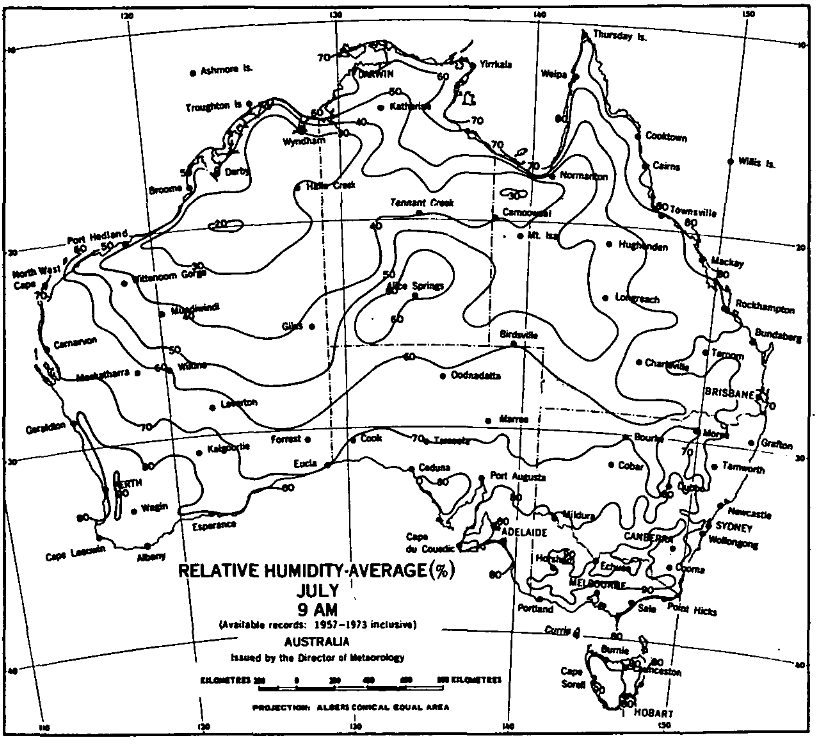


FIGURE 15





FIGURES 16 AND 17

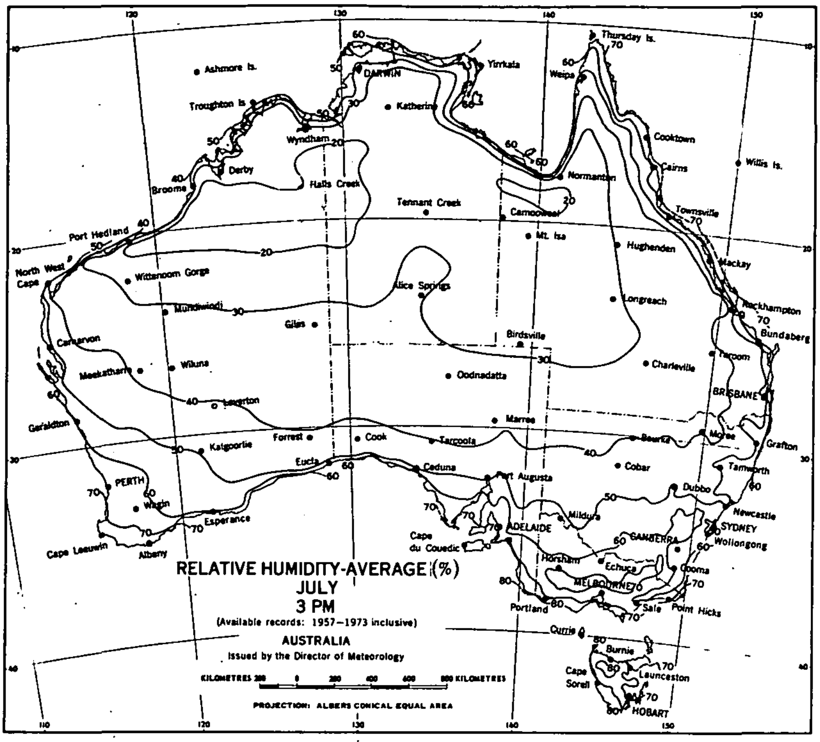


FIGURE 18

The tables below contain average relative humidity at 9 a.m. and 3 p.m. for each month and the year, for selected stations. Humidity values for the capital cities are contained in the detailed capital city statistical tables found further on.

AVERAGE RELATIVE HUMIDITY AT 9 A.M.
(per cent)

Station	*Period of record*	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Year*
Alice Springs	1941–89	33	39	40	46	56	65	60	47	34	30	28	30	42
Armidale	1907–87	63	69	71	73	78	80	77	71	61	57	56	57	68
Broome	1939–89	70	73	69	56	49	48	46	44	48	53	58	64	56
Carnarvon	1945–89	58	58	56	57	59	69	69	63	54	51	54	57	59
Ceduna	1939–89	53	59	60	66	76	81	80	75	63	54	50	51	64
Charleville	1942–89	46	52	52	53	63	71	66	56	44	40	37	39	52
Cloncurry	1939–75	52	60	52	45	47	51	45	37	31	31	31	40	43
Esperance	1969–89	57	60	64	70	74	78	77	74	68	61	59	57	67
Halls Creek	1944–89	51	55	45	34	35	34	30	25	22	25	29	40	36
Kalgoorlie	1939–89	44	51	53	59	68	74	74	66	54	47	44	43	56
Katanning	1957–89	56	63	66	75	83	88	88	86	80	68	59	56	72
Kiandra	1907–74	61	66	72	79	84	89	90	87	76	67	62	62	75
Marble Bar	1937–89	44	47	40	34	39	43	39	32	27	26	26	32	36
Mildura	1946–89	50	55	59	70	82	88	86	79	67	57	52	48	66
Mundiwindi	1938–81	31	35	34	37	44	53	49	39	28	23	22	23	35
Thursday Island	1950–89	84	86	85	82	81	81	80	78	75	73	73	78	80
Townsville	1940–89	72	75	73	69	68	66	67	63	60	61	63	66	67

AVERAGE RELATIVE HUMIDITY AT 3 P.M.
(per cent)

Station	*Period of record*	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Year*
Alice Springs	1941–89	20	23	23	25	31	34	30	24	19	19	18	19	23
Armidale	1909–87	44	47	47	48	52	56	52	47	42	42	40	41	46
Broome	1939–89	65	66	59	43	38	36	33	33	42	52	57	60	49
Carnarvon	1945–89	59	58	57	56	52	53	52	52	52	53	55	58	54
Ceduna	1939–89	42	45	45	45	51	54	55	50	45	43	40	42	46
Charleville	1942–89	27	32	32	31	36	39	35	29	24	23	21	23	29
Cloncurry	1939–75	32	38	34	29	29	30	26	22	20	19	19	24	27
Esperance	1969–89	56	58	58	57	58	60	59	57	57	56	57	57	57
Halls Creek	1944–89	33	37	31	25	26	24	22	18	17	17	20	27	25
Kalgoorlie	1939–89	24	29	31	37	43	49	47	39	31	27	25	23	33
Katanning	1957–89	30	33	37	47	57	67	66	62	56	44	36	30	46
Kiandra	1912–74	50	52	55	61	70	75	78	73	62	58	54	51	62
Marble Bar	1937–89	25	28	24	23	27	27	25	20	17	16	16	19	23
Mildura	1946–89	26	29	33	40	51	57	54	47	39	34	29	26	39
Mundiwindi	1938–81	19	22	21	22	27	32	28	22	15	13	13	14	20
Thursday Island	1951–89	78	81	79	74	71	69	67	65	65	64	66	71	71
Townsville	1940–89	66	67	65	60	57	51	51	51	52	55	58	60	58

Relative humidity is dependent on temperature and if the water content of the air remains constant, relative humidity decreases with increasing temperature. For instance Perth, for January, has a mean 9 a.m. relative humidity of 50 per cent, but for 3 p.m., when the mean temperature is higher, the mean relative humidity is 41 per cent.

Global radiation

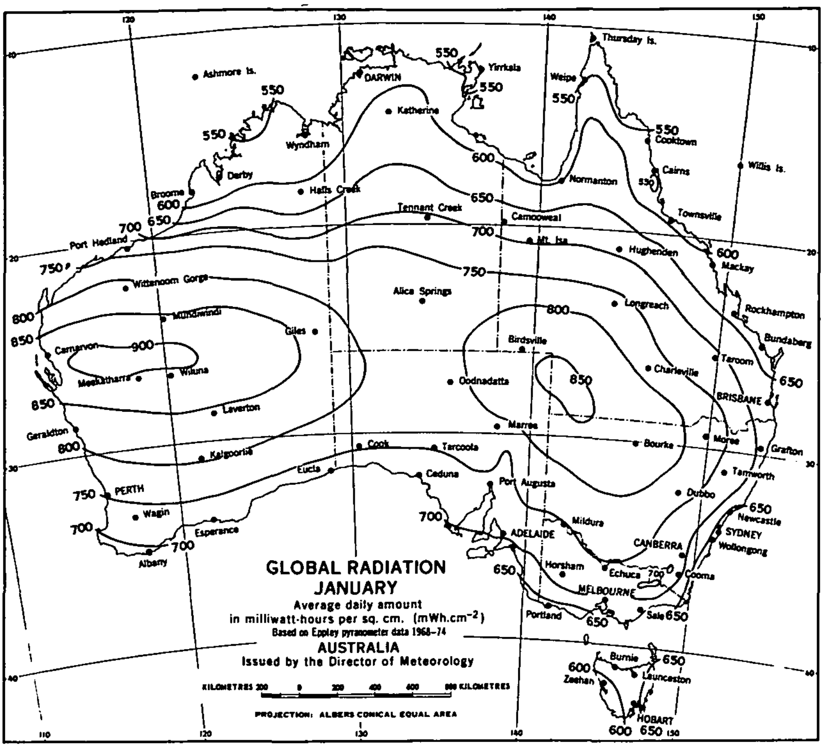
Global (short wave) radiation includes that radiation energy reaching the ground directly from the sun and that received indirectly from the sky, scattered downwards by clouds, dust particles, etc.

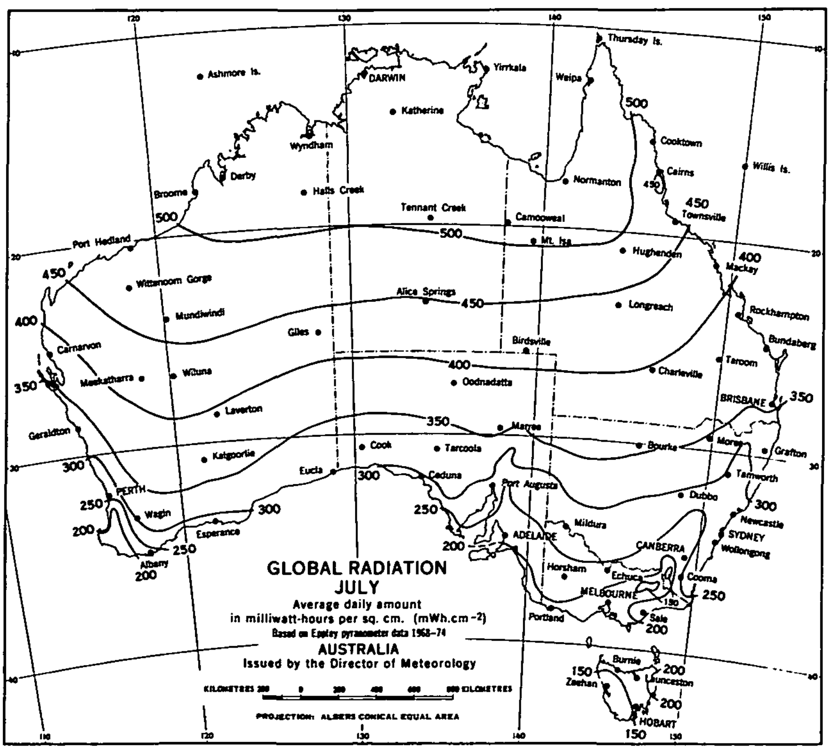
Figures 19 and 20 show the average global radiation for the months of January and July.

A high correlation exists between daily global radiation (Figures 19 and 20) and daily hours of sunshine (Figures 21 and 22). On the north-west coast around Port Hedland, where average daily global radiation is the highest for Australia (640 milliwatt hours), average daily sunshine is also highest, being approximately 10 hours. Sunshine is more dependent on variations in cloud coverage than is global radiation, since the latter includes diffuse radiation from the sky as well as direct radiation from the sun. An example is Darwin where, in the dry month of July, sunshine approaches twice that of the wet (cloudy) month of January but global radiation amounts for the two months are comparable.

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. Sunshine amounts at Australian capitals are included in the climatic tables at the end of this chapter.





FIGURES 19 AND 20

Average daily sunshine (hours) in January and July based on all available data to August 1974 is shown in Figures 21 and 22. Sunshine for April and October and annual amounts are included in the *Climatic Atlas of Australia, 1988*. In areas where there is a sparsity of data, estimates of sunshine derived from cloud data are used. 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 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. The table below gives the 20, 50 and 80 percentiles of daily bright sunshine for the months of January and July at selected stations. These values give an indication of the variability of daily sunshine hours. Perth, for example, has a high variability of daily sunshine hours in the wet month of July and a low variability in the dry month of January. Darwin has a low variability in the dry season month of July and a high variability in the wet season month of January.

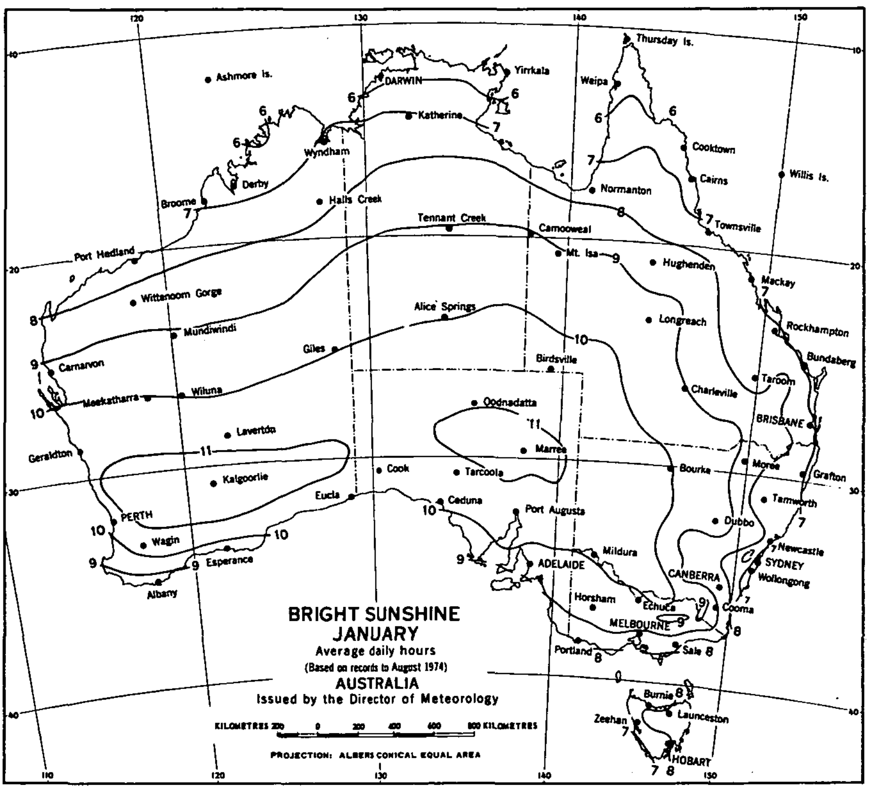


FIGURE 21

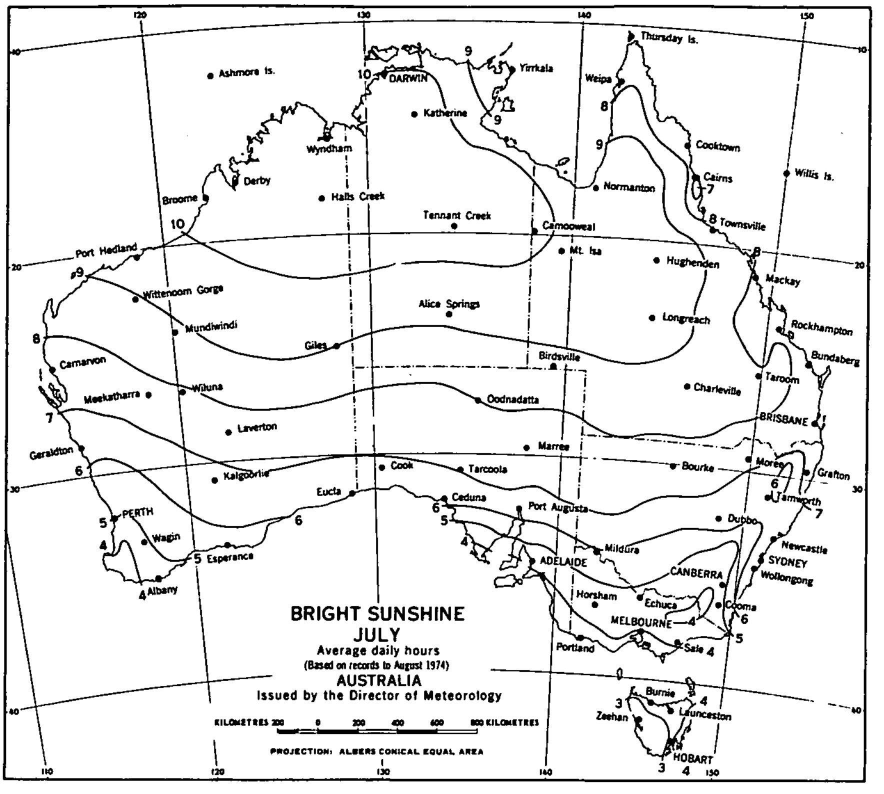


FIGURE 22

BRIGHT SUNSHINE, VARIABILITY OF DAILY HOURS
(20, 50 and 80 percentile values)

Station	Period of record	*January* Percentile 20	50	80	*July* Percentile 20	50	80
Adelaide	1955–1986	6.8	11.9	13.3	1.1	4.0	7.3
Alice Springs	1954–1986	7.8	11.8	13.0	7.6	10.4	10.7
Brisbane	1951–1985	2.6	8.4	11.5	4.5	9.0	9.9
Canberra	1978–1986	7.0	11.3	12.7	2.4	6.4	8.3
Darwin	1951–1986	1.5	5.9	9.4	9.8	10.6	10.9
Hobart	1950–1986	4.3	8.7	12.1	1.5	4.4	7.2
Melbourne	1955–1986	5.5	9.9	12.6	0.8	3.6	6.3
Perth	1942–1986	9.2	12.0	12.7	2.5	5.4	8.6
Sydney	1955–1986	1.9	8.1	11.6	3.2	7.5	9.3
Townsville	1943–1986	3.0	9.0	11.3	6.7	10.0	10.6

Evaporation

Evaporation is determined by measuring the amount of water evaporated from a free water surface exposed in a pan. Evaporation from a free water surface depends on a number of climatic elements, mainly temperature, humidity and wind. Evaporation data are useful in water conservation studies and estimating potential evapotranspiration for irrigation and plant growth studies. In Australia, where surface water storage is vital over large areas, evaporation is a highly significant element.

Average January, July and annual (Class A) pan evaporation is mapped in Figures 23, 24 and 25 respectively. Evaporation maps for other months of the year and a more comprehensive commentary are given in the *Climatic Atlas of Australia, 1988.*

Due to the relatively short records at some stations, the maps may not be representative of climate averages in some areas. Dashed isopleths on the maps over some coastal fringes to aid interpolation do not represent evaporation from ocean surfaces or expanses of water.

Evaporation varies markedly with exposure of the instrument. Sheltering from wind and shading of pans cause local variations in measured evaporation of as much as 25 per cent. Instruments near expanses of water such as coastal inlets, rivers, reservoirs or irrigation systems may record lower evaporation than the surrounding country due to local effects on meteorological elements, notably humidity. Such reductions are about five to ten per cent.

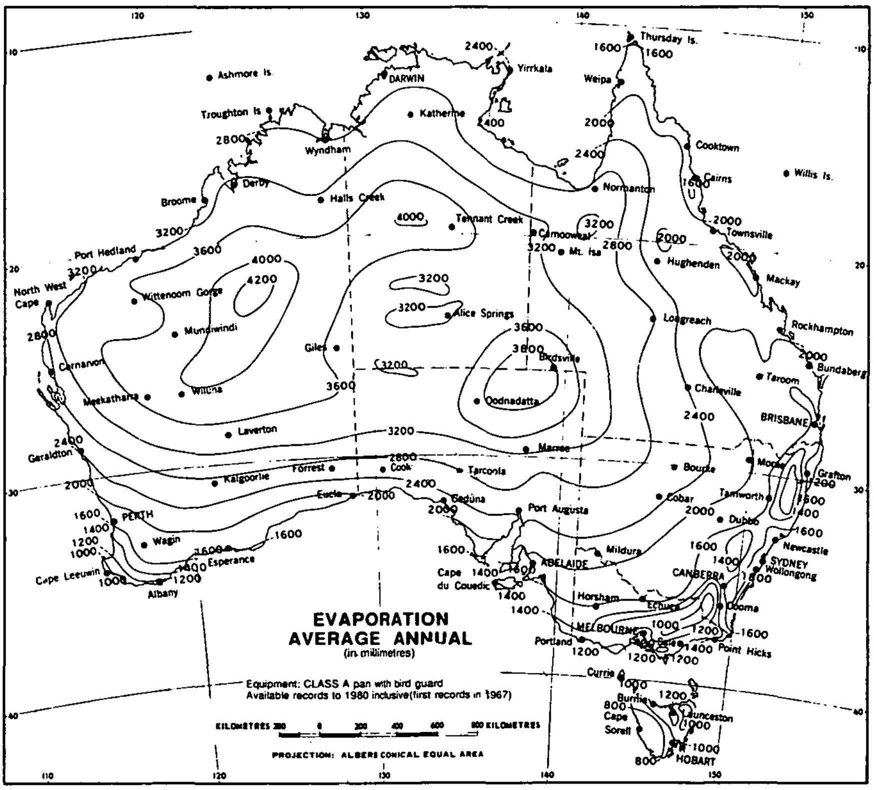
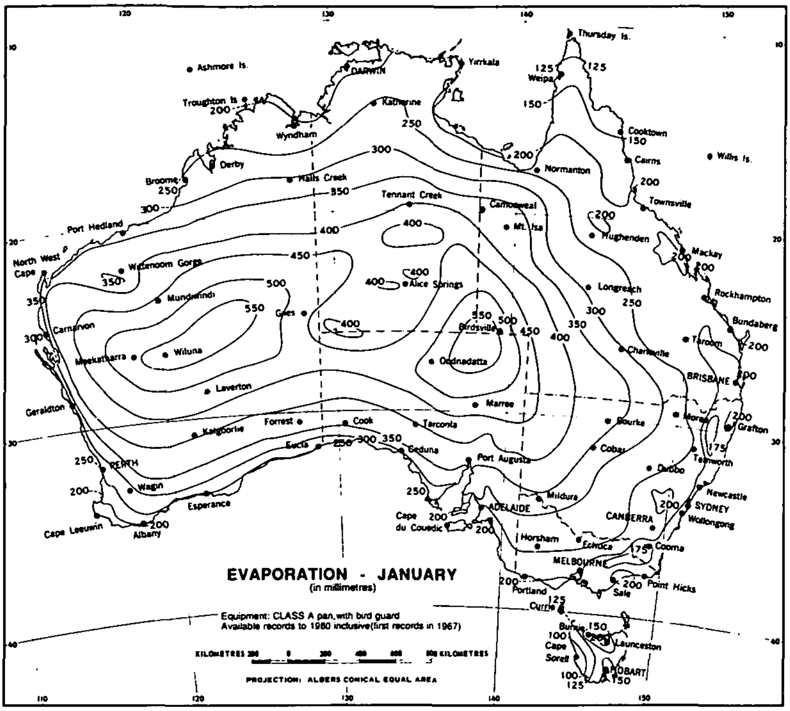
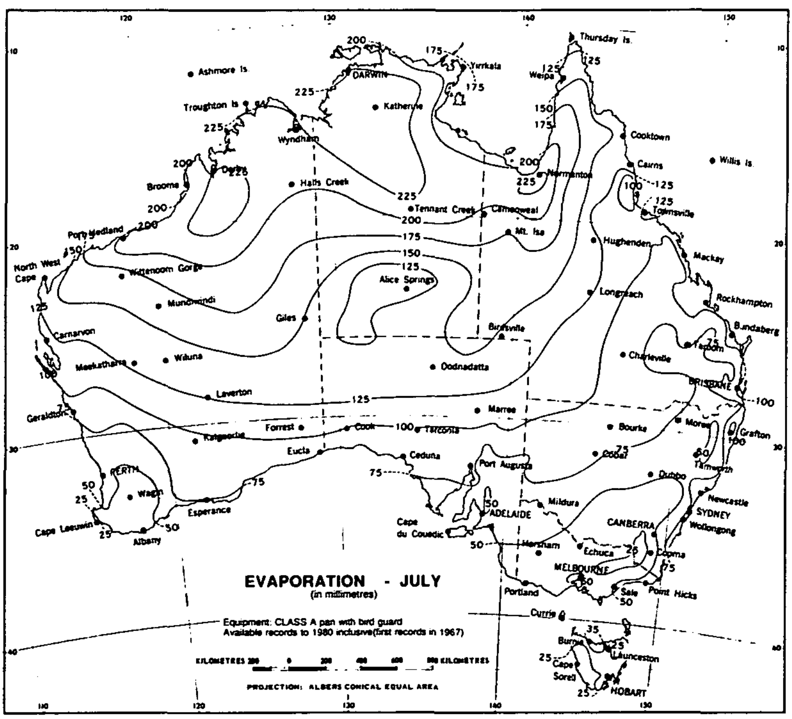


FIGURE 23





FIGURES 24 AND 25

The Class A pan instruments have a wire mesh bird guard, which reduces the measured evaporation. An estimate of the unguarded average Class A pan evaporation for any locality may be derived by applying a seven per cent increase to the value interpolated from the maps.

Average annual Class A pan evaporation ranges from more than 4,000mm over central Western Australia to less than 1,000mm in alpine areas of south-east Australia and in much of Tasmania.

In areas south of the tropics, average monthly evaporation follows seasonal changes in solar radiation, giving highest evaporation in December and January, and lowest in June and July. In the tropics, onset of summer brings increasing cloudiness and higher humidity, causing reduced evaporation in these months. Maximum evaporation in tropical areas occurs around November on average, but high evaporation is sustained when summer rains are delayed or are persistently below average.

Cloud and fog

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.

The average monthly and annual number of cloudy days (days when the cloud coverage was greater than or equal to seven-eighths of the sky) and clear days (less than or equal to one-eighth) is included for the capital cities in the detailed capital city statistical tables.

Fog

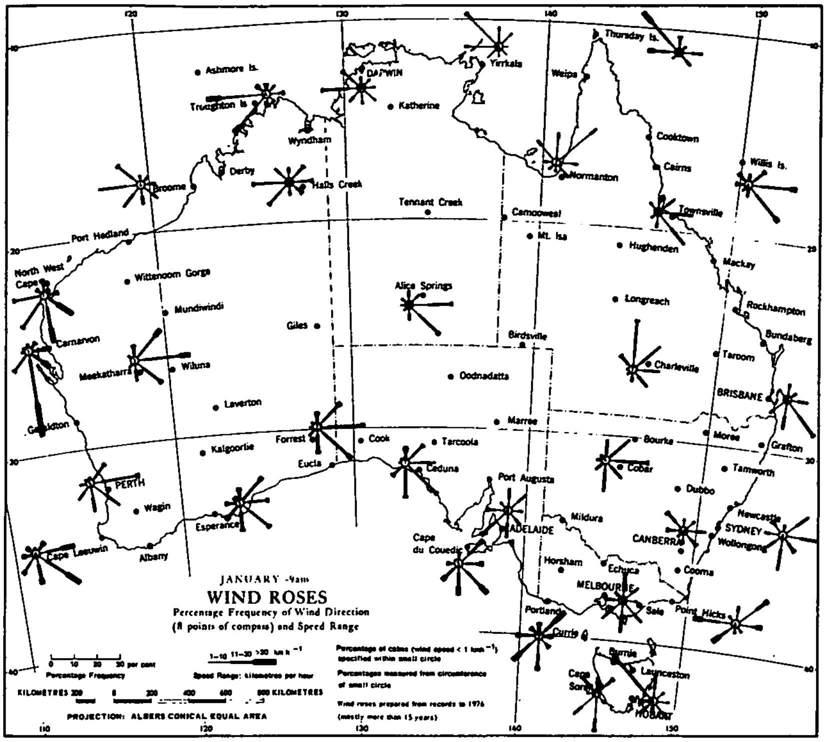
The formation of fog depends on the occurrence of favourable meteorological elements—mainly temperature, humidity, wind and cloud cover. The nature of the local terrain is important for the development of fog and there is a tendency for this phenomenon to persist in valleys and hollows. The incidence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

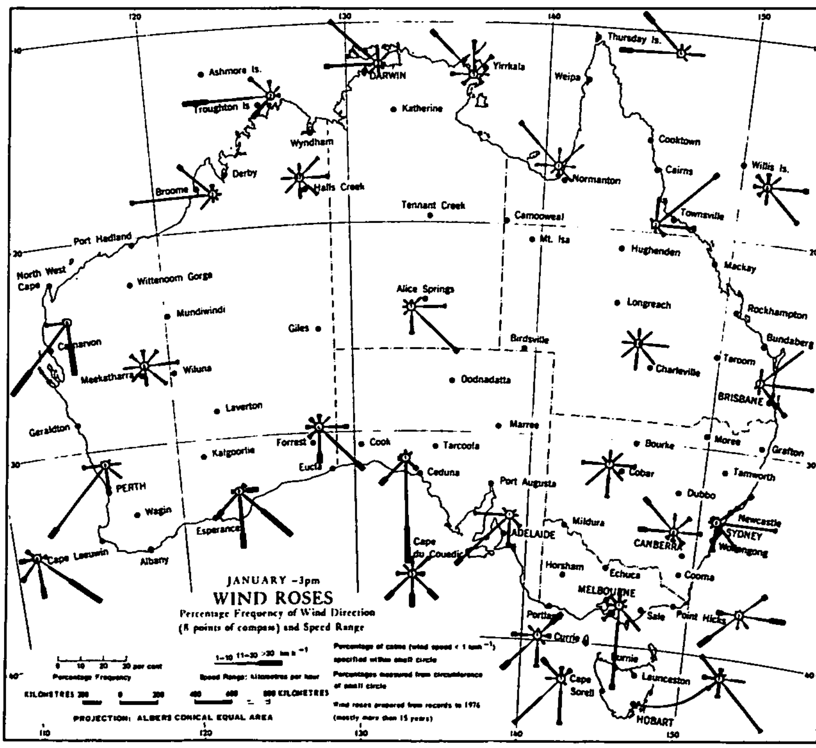
Fog in Australia tends to be greater in the south than the north, although parts of the east coastal areas are relatively fog prone even in the tropics. Incidence is much greater in the colder months, particularly in the eastern uplands. Fog may persist during the day but rarely until the afternoon over the interior. The highest fog incidence at a capital city is at Canberra which has an average of 47 days per year on which fog occurs, 29 of which are in the period of May to August. Brisbane averages 20 days of fog per year. Darwin averages only 2 days per year, in the months of July and August.

Winds

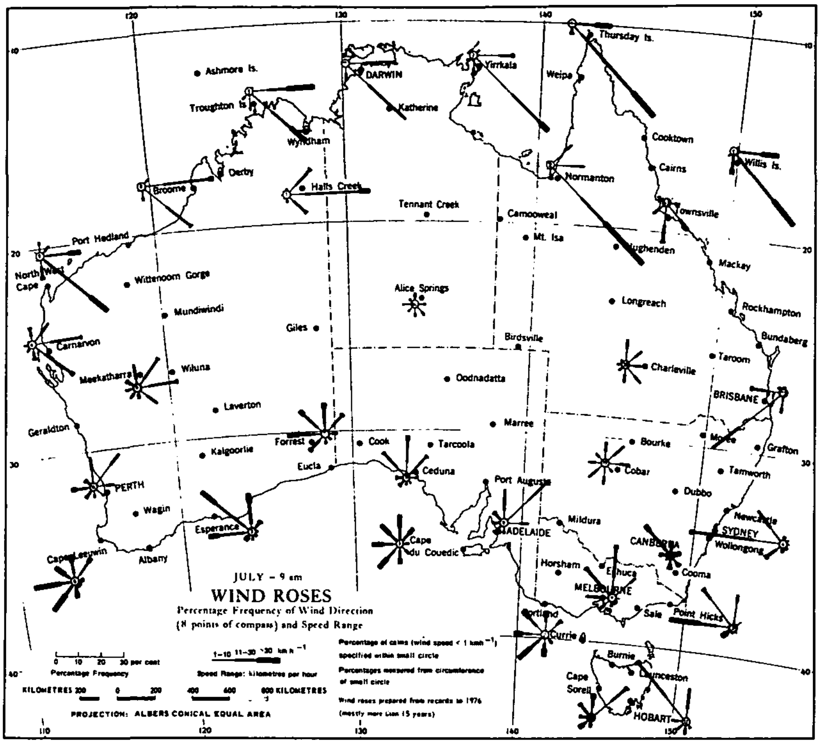
The mid-latitude anticyclones are the chief determinants of Australia's two main prevailing wind streams. In relation to the west–east axes of the anticyclones these streams are easterly to the north and westerly to the south. The cycles of development, motion and decay of low pressure systems to the 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.

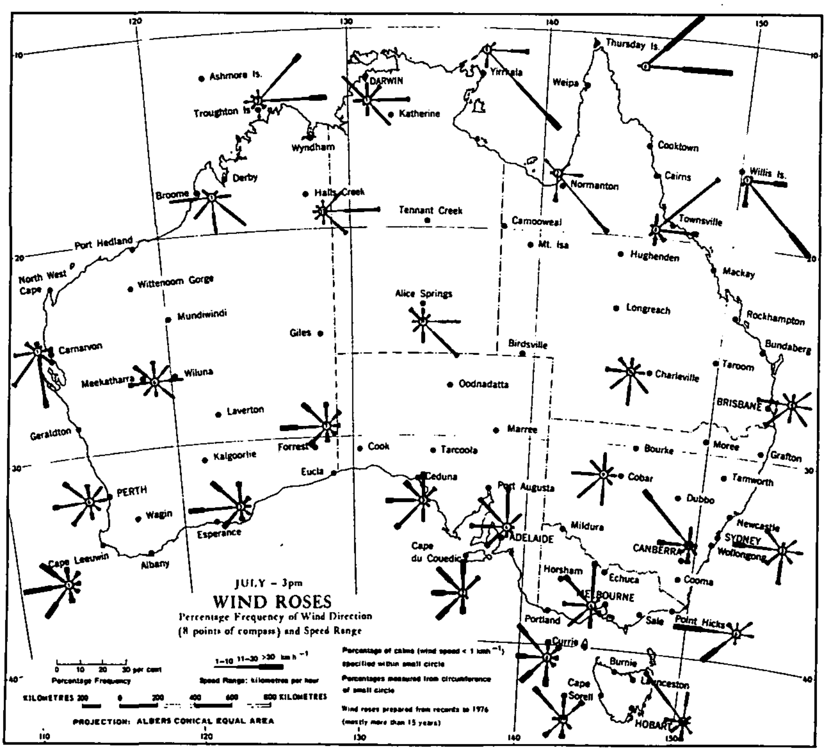
Wind roses for the months of January and July at 9 a.m. and 3 p.m. at selected stations are shown in Figures 26 to 29 inclusive, extracted from *Climatic Atlas of Australia, 1988.*





FIGURES 26 AND 27





FIGURES 28 AND 29

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 north-west winds at Hobart caused by the north-west – south-east orientation of the Derwent River Valley.

Average wind speeds and prevailing directions at Australian capitals are included in the detailed climatic tables. 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 5.4 kilometres per hour.

The highest wind speeds and wind gusts recorded in Australia have been associated with tropical cyclones. The highest recorded gust was 259 kilometres per hour at Mardie (near 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.

Droughts

Drought, in general terms, refers to an acute deficit of water supply to meet a specified demand. 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. Demands for water are very diverse, hence the actual declaration of drought conditions for an area will generally also depend on the effects of a naturally occurring water deficit on the principal local industries.

Since the 1860s there have been nine major Australian droughts. Some of these major droughts could be described as periods consisting of a series of dry spells of various lengths, overlapping in time and space, and totalling up to about a decade. The drought periods of 1895–1903 and 1958–68 and the drought of 1982–83 were the most devastating in terms of their extent and effects on primary production. The remaining six droughts occurred in 1864–66 (and 1868), 1880–86, 1888, 1911–16, 1918–20 and 1939–45.

In this same period, six droughts of lesser severity caused significant losses over large areas of several States. They occurred in 1922–23 and 1926–29, 1933–38, 1946–49, 1951–52, 1970–73 and 1976.

South-eastern Australia (New South Wales, southern Queensland, Victoria, Tasmania and the settled parts of South Australia) contains about 75 per cent of the nation's population, and droughts affecting this region have a markedly adverse impact on the economy. There have been eight severe droughts in south-eastern Australia since 1888, and these were encompassed within the major Australian droughts specified previously, except for the severe drought in 1972–73. Drought definitions and the area of coverage and length of these droughts, together with related information may be obtained from *Year Book Australia 1988.*

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 caused by summer rains, they may occur in any season.

The great Fitzroy and Burdekin river basins of Queensland receive flood rains during the summer wet seasons. 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.

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 (Ashton, 1964). However, climatic strain has been measured experimentally, and discomfort indices based on the average response of subjects under specified conditions have been derived. One of the most commonly used indices is the relative strain index. The index, derived by Lee and Henschel (1963), has been applied in Australia to measure heat discomfort. The results obtained with Australian data are useful for purposes of comparison but interpretation of the actual results is tentative until empirical environmental studies are carried out in this region. In addition to temperature, humidity and air movement, the relative strain index has facilities for the incorporation of metabolic heat rate, net radiation and insulation of clothing. It has the advantage of being applicable to manual workers under shelter and expending energy at various metabolic heat rates.

The discomfort map, Figure 30, shows the average number of days per year when the relative strain index exceeds 0.3 discomfort level at 3 p.m. assuming standard conditions as defined (see following table). Maximum discomfort generally occurs around 3 p.m. on days of high temperature.

A notable feature is the lower frequency of days of discomfort in Queensland coastal areas in comparison with the northern coastal areas of Western Australia. This is due to the onshore winds prevailing on the Queensland coast and the cooling effect of the adjacent eastern uplands. Lower frequencies on the Atherton Plateau in the tropics near Cairns show the advantage of altitude. Relatively low heat discomfort frequencies are evident in upland and coastal areas of south-east Australia. Tasmania is entirely in the zone of least discomfort, experiencing on the average less than one day of heat discomfort per year. In Western Australia most of the Kimberley region in the north lies in the highest discomfort zone with the frequencies decreasing southwards to a strip of lowest discomfort towards the south-west coast. A steep gradient of discomfort frequency on the west coast shows the moderating effect of sea-breezes.

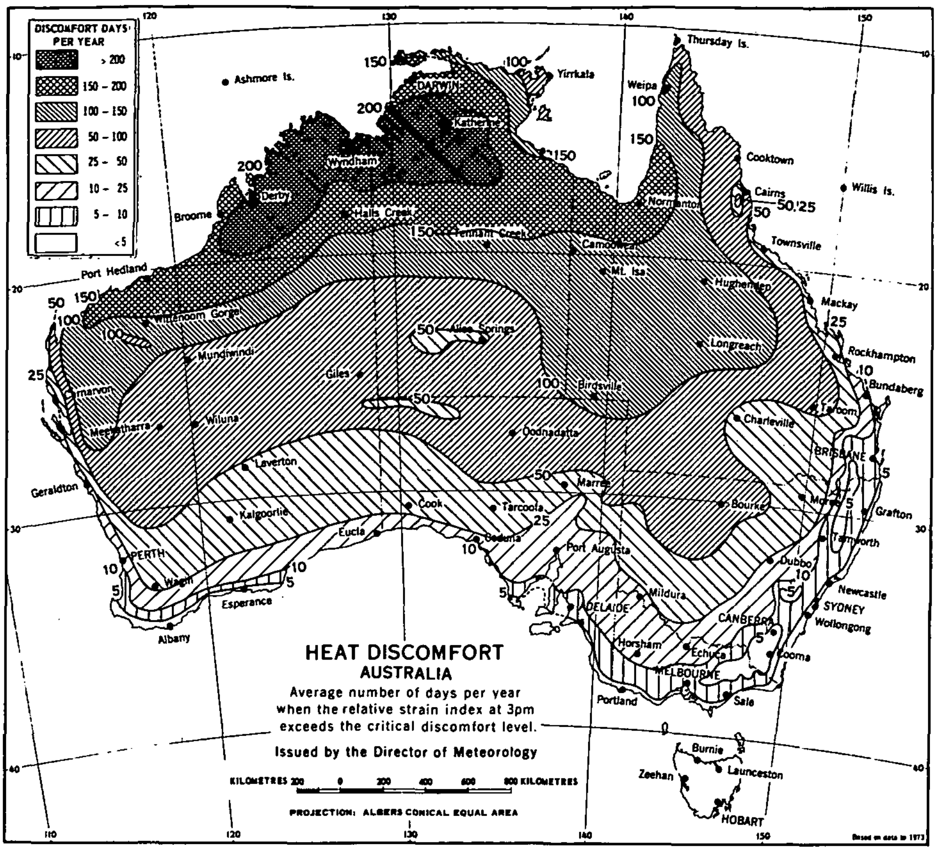


FIGURE 30

The average annual frequency of days when the relative strain index at 3 p.m. exceeds specified discomfort levels is shown in the table below. The Sydney frequencies were derived from observations at the regional office of the Bureau of Meteorology, which is representative of eastern coastal suburbs; frequencies are higher in western suburbs. The Melbourne frequencies were derived from observations at the Bureau's regional office, which may be taken as fairly representative of inner northern and eastern suburbs; frequencies are lower in bayside suburbs. Similarly, in other capital city areas significant variations occur with distance from the coast.

HEAT DISCOMFORT(a)

Station	*Period of record*	Greater than— *0.3 RSI*	*0.4 RSI*
Adelaide	1956–86	6	2
Alice Springs	1942–87	52	4
Brisbane	1951–85	7	2
Broome	1941–67	163	66
Canberra	1940–87	3	<1
Carnarvon	1950–87	25	6
Ceduna	1943–87	15	3
Charleville	1943–87	45	6
Cloncurry	1942–74	132	37
Cobar	1964–85	23	3
Darwin	1943–87	173	32
Hobart	1944–87	<1	<1
Kalgoorlie	1943–87	28	4
Marble Bar	1957–74	179	86
Melbourne	1955–87	6	2
Mildura	1947–87	20	4
Perth	1942–87	13	2
Rockhampton	1940–87	42	8
Sydney	1955–86	3	<1
Townsville	1941–87	48	5
Wagga	1945–85	12	2
Woomera	1950–87	28	5

(a) Average number of days per year when relative strain index (RSI) at 3 p.m. exceeds 0.3 (discomfort) and 0.4 (high discomfort) under standard conditions (indoors, manual activities, light clothing, air movement 60 metres per minute)

At inland places, relatively low night temperatures have recuperative effects after hot days.

Acclimatised people would suffer discomfort less frequently than shown by the relative strain index figures. For example, Australians living in the north evidently experience less discomfort at high air temperatures than those in the south, if humidities are comparable.

Both direction and speed of prevailing winds are significant for the ventilation of buildings. In the tropics, for instance, windward slopes allow optimal air movement enabling more comfortable ventilation to be obtained. Regular sea-breezes such as those experienced at Perth reduce discomfort although on some days their full benefit may not be experienced until after 3 p.m.

Climatic data for capital cities

The means and/or extremes for a number of elements determined from long-period observations at the Australian captials are given in the following pages. In general, all data up to and including 1987 are covered. Data for other localities are contained in *Climatic Averages Australia, 1988.*

CLIMATIC DATA: SYDNEY, NEW SOUTH WALES
(Lat. 33° 52′ S., Long. 151° 12′ E. Height above mean sea level (M.S.L.) 42 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDY AND CLEAR DAYS

Month		Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (hPa)	Wind (height of anemometer 22 metres) Average (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amount evaporation (mm)	Mean No. days thunder	Mean No. cloudy days (a)	Mean No. clear days (b)
No. of years of record		72	32	62	(c)	(c)	(d)	67	31	76
January		1,012.7	12.3	150	S	E	220	3.2	12	5.1
February		1,014.3	11.6	111	S	E	178	2.5	11	4.6
March		1,016.4	10.5	96	W	E	164	1.6	10	5.9
April		1,018.3	10.2	116	W	E	123	1.2	8	7.7
May		1,018.9	10.5	135	W	S	93	0.8	8	7.9
June		1,018.8	11.6	135	W	S	78	0.8	9	8.2
July		1,018.6	11.5	109	W	W	90	0.7	6	10.7
August		1,017.9	12.1	113	W	W	115	1.3	6	10.9
September		1,017.0	11.6	131	W	E	141	1.8	7	9.0
October		1,015.3	12.3	153	W	ENE	171	2.6	10	6.5
November		1,013.6	12.4	118	S	E	192	3.5	10	5.3
December		1,012.0	12.3	121	S	ENE	239	3.6	10	5.0
	Totals	..	..	..	..	..	**1,804**	**23.7**	**107**	**86.8**
Year	**Averages**	**1,016.1**	**11.6**	..	**W**	**E**	..	..	..	..
	Extremes	..	..	**153**	..	..	..	..	..	..

(a) Mean number of days when cloud cover equalled or exceeded seven-eighths. *(b)* Mean number of days when cloud cover was less than or equal to one-eighth. *(c)* Years 1895–1988 inclusive. *(d)* Sydney Airport, Class A Pan (1974–80).

TEMPERATURE AND SUNSHINE

Month		Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest max.	Date	Lowest min.	Date	Extreme temperature (°Celsius) Lowest terrestrial min.	Date	Mean daily hours sunshine
No. of years of record		123	123	123	123		123		124		61
January		25.8	18.4	22.1	45.3	14/39	10.6	18/49	6.5	6/25	7.2
February		25.5	18.5	22.0	42.1	8/26	9.6	28/63*	6.0	22/33	6.8
March		24.6	17.4	21.0	39.2	3/69*	9.3	14/86*	4.4	17/13	6.3
April		22.2	14.6	18.4	33.9	5/86	7.0	27/64*	0.7	24/09	6.3
May		19.7	11.3	15.5	30.0	1/19	4.4	30/62*	−1.5	25/17	5.8
June		16.7	9.2	12.9	26.9	11/31	2.1	22/32	−2.2	22/32	5.3
July		15.9	7.9	11.9	25.7	22/26	2.2	12/90*	−4.4	4/93*	6.3
August		17.5	8.9	13.2	30.4	24/54	2.7	3/72*	−3.3	4/09	6.9
September		19.7	10.9	15.3	34.6	26/65	4.9	2/45	−1.1	17/05	7.2
October		21.9	13.4	17.7	37.4	4/42	5.7	6/27	0.4	9/05	7.3
November		23.5	15.5	19.5	40.3	6/46	7.7	1/05	1.9	21/67	7.6
December		25.0	17.3	21.1	42.2	20/5	9.1	3/24	5.2	3/24	7.5
Year	**Averages**	**21.5**	**13.6**	**17.4**	..	..	..	..	..	..	**6.7**
	Extremes	..	..	..	**45.3**	**14/1/39**	**2.1**	**22/6/32**	**−4.4**	**4/7/1893**	..

NOTE: Figures such as 14/39, 18/49, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century.

CLIMATIC DATA: SYDNEY, NEW SOUTH WALES—*continued*
(Lat. 33° 52′ S., Long. 151° 12′ E. Height above mean sea level (M.S.L.) 42 metres)

HUMIDITY, RAINFALL AND FOG

Month	Rel. hum (%) 9 a.m. mean	Rel. hum (%) 3 p.m. mean	Rainfall (millimetres) Mean monthly	Mean No. of days of rain	Greatest monthly		Least monthly		Greatest in one day	Date	Mean No. days fog
No. of years of record	31	31	128	128	128		128		128		61
January	69	62	102	13	388	(1911)	6	(1932)	180	13/11	0.3
February	72	64	113	13	564	(1954)	3	(1939)	226	25/73*	0.6
March	72	62	135	14	521	(1942)	8	(1965)	281	28/42	1.3
April	71	58	124	13	622	(1861)	2	(1868)	191	29/00	1.9
May	72	55	121	13	585	(1919)	4	(1957)	212	28/89*	3.0
June	74	57	131	12	643	(1950)	4	(1962)	131	16/84*	2.4
July	69	50	101	11	336	(1950)	2	(1970)	198	7/31	1.9
August	66	49	80	11	471	(1986)	1	(1885)	328	6/86	1.5
September	62	51	69	11	357	(1879)	2	(1882)	145	10/79*	0.9
October	61	56	78	12	283	*(a)*	2	(1971)	162	13/02	0.6
November	63	57	81	12	517	(1961)	2	(1915)	235	9/84	0.5
December	65	59	77	12	402	(1920)	3	(1979)	126	9/70	0.4
Year Totals	..	..	**1,214**	**148**		..		..	..	..	**15.2**
Year Averages	**68**	**57**	..	..	..	..	..	..	..	..	..
Year Extremes	..	..	..	..	**643**	**(6/1950)**	**1**	**(8/1885)**	**281**	**28/3/1942**	..

(a) 1916 and 1959.
NOTE: Figures such as 13/11, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century. Bracketed figures indicate year of occurrence.

CLIMATIC DATA: MELBOURNE, VICTORIA
(Lat. 37° 49′ S., Long. 144° 58′ E. Height above M.S.L. 35 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDY AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (hPa)	Wind (height of anemometer 28 metres) Average (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amount evaporation (mm)	Mean No. days thunder	Mean No. cloudy days *(a)*	Mean No. clear days *(b)*
No. of years of record	130	*(c)*47	77	68	68	*(d)*20	79	31	79
January	1,012.9	11.9	106	S	S	204	1.6	7	6.5
February	1,014.4	11.5	119	S	S	179	1.7	7	6.2
March	1,016.8	10.5	106	N	S	135	1.3	10	5.4
April	1,019.0	10.1	108	N	S	91	0.7	11	4.2
May	1,019.2	10.6	116	N	N	57	0.4	14	2.9
June	1,019.0	10.8	103	N	N	36	0.2	13	2.7
July	1,018.6	12.1	109	N	N	43	0.2	12	2.6
August	1,017.6	12.1	108	N	N	61	0.6	13	2.7
September	1,016.0	12.4	120	N	S	85	0.7	11	3.6
October	1,014.8	12.2	111	N	S	125	1.5	12	3.6
November	1,014.0	12.5	114	SW	S	151	1.9	12	3.2
December	1,012.4	12.3	104	S	S	187	2.1	10	4.2
Year Totals	..	..	..	..	..	**1,356**	**12.8**	**132**	**48.0**
Year Averages	**1,016.2**	**11.7**	..	**N**	**S**	..	..	..	..
Year Extremes	..	..	**120**	..	..	..	..	..	..

(a) Mean number of days when cloud cover equalled or exceeded seven-eighths. *(b)* Mean number of days when cloud cover was less than or equal to one-eighth. *(c)* Early records not comparable. *(d)* Class A Pan.

CLIMATIC DATA: MELBOURNE, VICTORIA—*continued*
(Lat. 37° 49′ S., Long. 144° 58′ E. Height above M.S.L. 35 metres)

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest max.	Date	Lowest min.	Date	Extreme temperature (°Celsius) Lowest terrestrial min.	Date	Mean daily hours sunshine
No. of years of record	131	131	131	131		131		122		(a)52
January	25.8	14.0	19.9	45.6	13/39	5.6	28/85*	-1.0	28/85 *	8.1
February	25.7	14.3	20.0	43.2	8/83	4.6	24/24	-0.6	6/91 *	7.5
March	23.8	13.0	18.4	41.7	11/40	2.8	17/84*	-1.7	(b)	6.6
April	20.1	10.6	15.3	34.9	5/38	1.6	24/88*	-3.9	23/97 *	5.1
May	16.5	8.5	12.5	28.7	7/05	-1.2	29/16	-6.1	26/16	3.9
June	13.9	6.7	10.3	22.4	2/57	-2.2	11/66*	-6.7	30/29	3.4
July	13.3	5.7	9.5	23.1	30/75	-2.8	21/69*	-6.4	12/03	3.7
August	14.8	6.5	10.7	26.5	29/82	-2.1	11/63*	-5.9	14/02	4.6
September	17.1	7.7	12.4	31.4	28/28	-0.6	3/40	-5.1	8/18	5.5
October	19.5	9.3	14.4	36.9	24/14	0.1	3/71*	-4.0	22/18	5.9
November	21.8	10.9	16.4	40.9	27/94*	2.4	2/96*	-4.1	2/96 *	6.5
December	24.1	12.7	18.4	43.7	15/76	4.4	4/70*	0.7	1/04	7.3
Year **Averages**	**19.7**	**10.0**	**14.9**	..	..	..	..	..	..	**5.7**
Year **Extremes**	..	..	..	**45.6**	**13/1/39**	**-2.8**	**21/7/69***	**-6.7**	**30/6/29**	..

(*a*) Discontinued 1967. (*b*) 17/1884 and 20/1897.
NOTE: Figures such as 13/39, 28/85*, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century.

HUMIDITY, RAINFALL AND FOG

Month	Rel. hum (%) 9 a.m. mean	3 p.m. mean	Rainfall (millimetres) Mean monthly	Mean No. of days of rain	Greatest monthly		Least monthly		Greatest in one day	Date	Mean No. days fog
No.of years of record	78	78	131	131	131		131		128		129
January	59	46	47	8	176	(1963)	(*a*)	(1932)	108	29/63	0.1
February	63	48	48	7	238	(1972)	(*a*)	(1965)	87	26/46	0.3
March	65	50	53	9	191	(1911)	4	(1934)	90	5/19	0.7
April	72	54	58	11	195	(1960)	Nil	(1923)	80	23/60	1.7
May	78	61	58	14	142	(1942)	4	(1934)	51	15/74	3.4
June	82	65	49	14	115	(1859)	8	(1858)	44	22/04	4.3
July	81	63	48	15	178	(1891)	9	(1979)	74	12/91*	4.1
August	75	58	51	15	111	(1939)	12	(1903)	54	17/81*	2.2
September	68	54	59	14	201	(1916)	13	(1907)	59	23/16	0.8
October	62	52	68	14	193	(1869)	7	(1914)	61	21/53	0.4
November	61	50	59	12	206	(1954)	6	(1895)	73	1/54	0.2
December	59	47	58	10	182	(1863)	1	(1972)	100	4/54	0.2
Year **Totals**	..	..	**655**	**143**		..		..	..	..	**18.2**
Year **Averages**	**69**	**54**	..	..		..		..	..	..	..
Year **Extremes**	..	..	..	..	**238**	**(2/72)**	**Nil**	**(4/23)**	**108**	**29/1/63**	..

(*a*) Less than 1 mm.
NOTE: Figures such as 29/63, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century. Bracketed figures indicate year of occurrence.

CLIMATIC DATA: BRISBANE, QUEENSLAND
(Lat. 27° 28′ S., Long. 153° 2′ E. Height above M.S.L. 41 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDY AND CLEAR DAYS

Month		Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (hPa)	Wind (height of anemometer 32 metres): Average (km/h)	Highest gust speed (km/h)	Prevailing direction: 9 a.m.	3 p.m.	Mean amount evaporation (mm)	Mean No. days thunder	Mean No. cloudy days (a)	Mean No. clear days (b)
No. of years of record		99	70	71	(c)	(c)	(d)19	99	99	78
January		1,011.7	11.7	145	SE	NE	176	4.4	4	3.2
February		1,012.5	11.5	108	SSW	NE	142	3.5	4	2.5
March		1,014.5	11.1	106	SSW	ENE	140	2.2	4	5.5
April		1,017.1	10.1	104	SW	SE	114	1.4	2	7.7
May		1,018.5	9.5	87	SW	SE	81	0.5	3	9.5
June		1,018.4	9.8	95	SW	W	64	0.5	2	10.5
July		1,018.9	9.6	111	SW	W	70	0.3	2	13.3
August		1,018.9	9.7	100	SW	NE	98	1.3	2	13.5
September		1,017.8	10.1	102	SW	NE	128	2.7	2	12.4
October		1,016.1	10.6	100	SW	NE	152	4.1	3	8.3
November		1,014.2	11.1	111	SE	NE	168	5.6	3	5.8
December		1,012.1	11.4	127	SE,N	NE	193	6.5	3	4.5
Year	**Totals**	..	..	..	..	..	**1,526**	**33.0**	**34**	**96.7**
	Averages	**1,015.9**	**10.5**	..	**SW**	**NE**	..	..	..	..
	Extremes	..	..	**145**	..	..	..	..	..	..

(a) Mean number of days when cloud cover equalled or exceeded seven-eighths. (b) Mean number of days when cloud cover was less than or equal to one-eighth. (c) Years 1887–1986 inclusive. (d) Class A Pan.

TEMPERATURE AND SUNSHINE

Month		Air temperature daily readings (°Celsius): Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius): Highest max.	Date	Lowest min.	Date	Extreme temperature (°Celsius): Lowest terrestrial min.	Date	Mean daily hours sunshine
No. of years of record		99		99	99		99		98		77
January		29.4	20.8	25.0	43.2	26/40	14.9	4/93*	9.9	4/93*	7.6
February		29.0	20.6	24.8	40.9	21/25	14.7	23/31	9.5	22/31	7.0
March		28.0	19.4	23.7	38.8	13/65	11.3	29/13	7.4	29/13	6.8
April		26.1	16.7	21.3	36.1	19/73	6.9	25/25	2.6	24/25	7.2
May		23.2	13.4	18.3	32.4	21/23	4.8	30/51	-1.2	8/97*	6.8
June		20.8	10.9	15.9	31.6	19/18	2.4	29/08	-3.7	23/88*	6.7
July		20.4	9.6	15.0	29.1	23/46	2.3	(a)	-4.5	11/90*	7.0
August		21.8	10.3	16.1	32.8	14/46	2.7	13/64	-2.7	9/99*	8.0
September		24.0	12.9	18.5	38.3	22/43	4.8	1/96*	-0.9	1/89*	8.3
October		26.1	15.9	20.9	40.7	30/58	6.3	3/99*	1.6	8/89*	8.2
November		27.8	18.2	22.9	41.2	18/13	9.2	2/05	3.8	1/05	8.2
December		29.1	19.9	24.5	41.2	7/81	13.5	5/55	9.5	3/94*	8.2
Year	**Averages**	**25.5**	**15.7**	**20.6**	..	..	..	..	..	..	**7.5**
	Extremes	..	..	..	**43.2**	**26/1/1940**	**2.3**	**(a)**	**-4.5**	**11/7/1890**	..

(a) 12/1894 and 2/1896.
NOTE: Figures such as 26/40, 4/93*, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century.

CLIMATIC DATA: BRISBANE, QUEENSLAND—*continued*
(Lat. 27° 28′ S., Long. 153° 2′ E. Height above M.S.L. 41 metres)

HUMIDITY, RAINFALL AND FOG

Month	Rel. hum (%) 9 a.m. mean	Rel. hum (%) 3 p.m. mean	Rainfall (millimetres) Mean monthly	Mean No. of days of rain	Greatest monthly		Least monthly		Greatest in one day	Date	Mean No. days fog
No. of years of record	47	44	135	126	135		135		135		99
January	66	58	164	13	872	(1974)	8	(1919)	465	21/87*	0.5
February	70	60	161	14	1,026	(1893)	15	(1849)	270	6/31	0.5
March	71	59	143	15	865	(1870)	Nil	(1849)	284	14/08	1.1
April	69	54	87	11	388	(1867)	1	(1944)	178	3/72	2.1
May	70	52	73	10	410	(1980)	Nil	(1846)	149	9/80	2.9
June	70	51	68	8	647	(1967)	Nil	(1847)	283	12/67	2.7
July	68	47	57	7	330	(1973)	Nil	*(a)*	193	20/65	2.7
August	64	44	46	7	373	(1879)	Nil	*(b)*	124	12/87*	3.3
September	61	46	47	8	138	(1886)	*(c)*	(1979,80)	80	12/65	2.3
October	60	52	76	9	456	(1972)	*(c)*	(1948)	136	25/49	1.2
November	60	55	99	10	413	(1981)	Nil	(1842)	143	8/66*	0.5
December	62	57	130	12	441	(1942)	9	(1865)	168	28/71*	0.3
Year Totals	..	..	**1,151**	**123**	..		..		..	..	**20.0**
Year Averages	**66**	**53**	..	..	..		..		..	..	..
Year Extremes	..	..	..	..	**1,026**	**(2/1893)**	**Nil**	**(Various)**	**465**	**21/1/1887**	..

(a) 1841 and 1951. *(b)* 1862, 1869, 1880 and 1977. *(c)* Less than 1 mm.
NOTE: Figures such as 21/87*, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century. Bracketed figures indicate year of occurrence.

CLIMATIC DATA: ADELAIDE, SOUTH AUSTRALIA
(Lat. 34° 56′ S., Long. 138° 35′ E. Height above M.S.L. 43 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDY AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (hPa)	Wind (height of anemometer 22 metres) Average (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amount evaporation (mm)	Mean No. days thunder	Mean No. cloudy days *(a)*	Mean No. clear days *(b)*
No. of years of record	121	*(c)*23	63	*(d)*	*(d)*	*(e)*12	105	45	62
January	1,013.2	12.8	116	SW	SW	254	1.5	3	11.9
February	1,014.3	12.1	106	SW	SW	216	1.1	3	10.8
March	1,017.2	11.4	126	NE	SW	180	0.8	4	10.7
April	1,019.9	11.4	130	NE	SW	120	1.0	6	6.7
May	1,020.1	11.3	113	NE	WSW	79	1.0	7	4.5
June	1,019.9	11.6	108	NE	NNW	56	0.9	7	3.8
July	1,020.8	11.8	148	NE	NNW	60	0.8	8	3.5
August	1,019.0	12.8	121	NE	WSW	78	1.1	6	4.6
September	1,017.7	13.2	111	NE	W	110	1.3	6	5.5
October	1,016.0	13.6	121	NE	SW	164	1.9	6	5.6
November	1,015.0	13.9	130	SW	WSW	196	2.0	5	6.5
December	1,013.3	13.5	121	W	SW	242	1.5	4	8.7
Year Totals	..	..	..	..	..	**1,751**	**14.9**	**65**	**82.6**
Year Averages	**1,017.1**	..	..	**NE**	**SW**	..	..	..	..
Year Extremes	..	..	**148**	..	..	..	..	..	..

(a) Mean number of days when cloud cover equalled or exceeded seven-eighths. *(b)* Mean number of days when cloud cover was less than or equal to one-eighth. *(c)* Records of cup anemometer. *(d)* Years 1887–1977 inclusive. *(e)* Class A Pan.

CLIMATIC DATA: ADELAIDE, SOUTH AUSTRALIA—*continued*
(Lat. 34° 56′ S., Long. 138° 35′ E. Height above M.S.L. 43 metres)

TEMPERATURE AND SUNSHINE

Month	*Air temperature daily readings (°Celsius)* Mean max.	Mean min.	Mean	*Extreme air temperature (°Celsius)* Highest max.	Date	Lowest min.	Date	*Extreme temperature (°Celsius)* Lowest terrestrial min.	Date	Mean daily hours sunshine
No. of years of record	122	122	122	125		125		119		95
January	29.5	16.4	23.0	47.6	12/39	7.3	21/84*	1.8	3/77	10.0
February	29.3	16.6	23.0	45.3	12/99*	7.5	23/18	2.1	23/26	9.3
March	26.8	15.1	21.0	43.6	9/34	6.6	21/33	0.1	21/33	7.9
April	22.7	12.6	17.7	37.0	5/38	4.2	15/59*	–3.5	30/77	6.0
May	18.7	10.3	14.5	31.9	4/21	*(a)*1.5	22/85	–3.6	19/28	4.8
June	15.8	8.3	12.1	25.6	4/57	*(a)*–0.4	8/82	–6.1	24/44	4.2
July	15.0	7.3	11.1	26.6	29/75	0.0	24/08	–5.5	30/29	4.3
August	16.4	7.8	12.1	29.4	31/11	0.2	17/59*	–5.1	11/29	5.3
September	18.9	9.0	13.9	35.1	30/61	0.4	4/58*	–3.9	25/27	6.2
October	22.0	10.9	16.5	39.4	21/22	2.3	20/58*	–3.0	22/66	7.2
November	25.1	12.9	19.1	45.3	21/65*	4.9	2/09	–0.6	17/76	8.6
December	27.7	15.0	21.3	45.9	29/31	6.1	*(b)*	–1.0	19/76	9.4
Year Averages	**22.3**	**11.9**	**17.1**	..	..	..	..	..	..	**6.9**
Year Extremes	..	..	..	**47.6**	**12/1/39**	**–0.4**	**24/7/08**	**–6.1**	**24/6/44**	..

(a) Recorded at Kent Town. *(b)* 16/1861 and 4/1906.
NOTE: *Figures such as 12/39, 21/84*, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century.*

HUMIDITY, RAINFALL AND FOG

Month	*Rel. hum (%)* 9 a.m. mean	3 p.m. mean	*Rainfall (millimetres)* Mean monthly	Mean No. of days of rain	Greatest monthly		Least monthly		Greatest in one day	Date	Mean No. days fog
No. of years of record	122	111	140	140	140		140		140		77
January	42	34	20	4	84	(1941)	Nil	*(a)*	58	2/89*	0.0
February	45	35	21	4	155	(1925)	Nil	*(a)*	141	7/25	0.0
March	49	39	24	5	117	(1878)	Nil	*(a)*	89	5/78*	0.0
April	58	47	44	9	154	(1971)	Nil	(1945)	80	5/60*	0.0
May	69	57	68	13	197	(1875)	3	(1934)	70	1/53*	0.4
June	76	64	72	15	218	(1916)	6	(1958)	54	1/20	1.1
July	77	64	66	16	160	(1890)	10	(1899)	44	10/65*	1.3
August	71	58	61	15	157	(1852)	8	(1944)	57	19/51*	0.6
September	62	52	51	13	148	(1923)	7	(1951)	40	20/23	0.2
October	53	45	44	11	133	(1949)	1	(1969)	57	16/08	0.0
November	46	39	31	8	113	(1839)	1	(1967)	75	12/60	0.0
December	43	36	26	6	101	(1861)	Nil	(1904)	61	23/13	0.0
Year Totals	..	..	**528**	**119**		..		..	..	..	**3.6**
Year Averages	**58**	**48**	..	..		..		..	..	..	..
Year Extremes	..	..	..	..	**218**	**(6/1916)**	**Nil**	*(b)*	**141**	**7/2/25**	..

(a) Various years. *(b)* December to April, various years.
NOTE: Figures such as 2/89*, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century. Bracketed figures indicate year of occurrence.
In February, 1977, the Adelaide Regional Office of the Bureau of Meteorology moved from West Terrace to Kent Town. Averages presented is this table are calculated from the observations recorded at West Terrace. Extremes recorded at Kent Town are marked.

CLIMATIC DATA: PERTH, WESTERN AUSTRALIA
(Lat. 31° 57′ S., Long. 115° 51′ E. Height above M.S.L. 19.5 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDY AND CLEAR DAYS

Month		Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (hPa)	Wind (height of anemometer 22 metres) Average (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amount evaporation (mm)	Mean No. days thunder	Mean No. cloudy days (a)	Mean No. clear days (b)
No. of years of record		94	46	68	(c)	(c)	(d)12	82	45	46
January		1,012.6	17.5	81	E	SW	285	0.9	2	14
February		1,013.0	17.2	113	E	SW	242	0.7	2	13
March		1,015.2	16.2	113	E	SW	213	0.7	2	12
April		1,017.9	13.7	130	E	SW	132	0.9	5	9
May		1,017.9	13.5	119	NE	SW	94	1.7	6	6
June		1,017.6	13.5	129	NE	NW	69	1.8	7	5
July		1,018.8	14.2	137	NE	NW	75	1.5	6	5
August		1,018.8	15.1	156	NE	W	87	1.3	5	6
September		1,018.4	15.1	109	E	SW	118	0.7	4	8
October		1,017.0	16.1	105	E	SW	173	0.7	3	8
November		1,015.5	17.2	101	E	SW	216	0.8	3	9
December		1,013.4	17.7	103	E	SW	275	0.9	2	13
	Totals	..	..	..	..	..	**1,979**	**12.6**	**47**	**108**
Year	**Averages**	**1,016.4**	**15.6**	..	**E**	**SW**	..	..	..	..
	Extremes	..	..	**156**	..	..	..	..	..	..

(a) Mean number of days when cloud cover equalled or exceeded seven-eighths. *(b)* Mean number of days when cloud cover was less than or equal to one-eighth. *(c)* Years 1942–1988 inclusive. *(d)* Class A Pan.

TEMPERATURE AND SUNSHINE

Month		Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest max.	Date	Lowest min.	Date	Extreme temperature (°Celsius) Lowest terrestrial min.	Date	Mean daily hours sunshine
No. of years of record		85	85	85	85		85		84		81
January		29.6	17.7	23.5	44.7	12/78	9.2	20/25	4.2	20/25	10.5
February		29.9	17.9	23.7	44.6	8/33	8.7	1/02	4.3	1/13	10.1
March		27.8	16.6	22.2	41.3	14/22	7.7	8/03	2.6	(a)	9.0
April		24.5	14.1	19.2	37.6	9/10	4.1	20/14	−0.7	26/60	7.4
May		20.7	11.6	16.1	32.4	2/07	1.3	11/14	−3.9	31/64	5.9
June		18.2	9.9	14.1	28.1	5/75	1.6	22/55	−3.4	27/46	4.9
July		17.3	9.0	13.2	26.3	17/76	1.2	7/16	−3.8	30/20	5.3
August		17.9	9.1	13.5	27.8	21/40	1.9	31/08	−3.0	18/66	6.2
September		19.4	10.1	14.8	32.7	30/18	2.6	6/56	−2.7	(b)	7.2
October		21.2	11.5	16.3	37.3	29/67	4.2	6/68	−1.2	16/31	8.3
November		24.6	14.0	19.2	40.3	24/13	5.6	1/04	−1.1	6/71	9.7
December		27.3	16.2	21.7	42.3	31/68	8.6	29/57	3.3	29/57	10.6
Year	**Averages**	**23.2**	**13.1**	**18.2**	..	..	..	..	..	..	**7.9**
	Extremes	..	..	..	**44.7**	**12/1/78**	**1.2**	**7/7/16**	**−3.9**	**31/5/64**	..

(a) 8/1903 and 16/1967. *(b)* 8/1952 and 6/1956.
NOTE: Figures such as 12/78, 20/25 indicate, in respect of the month of reference, the day and year of occurrence.

CLIMATIC DATA: PERTH, WESTERN AUSTRALIA—*continued*
(Lat. 31° 57′ S., Long. 115° 51′ E. Height above M.S.L. 19.5 metres)

HUMIDITY, RAINFALL AND FOG

Month		Rel. hum (%) 9 a.m. mean	3 p.m. mean	Rainfall (millimetres) Mean monthly	Mean No. of days of rain	Greatest monthly		Least monthly		Greatest in one day	Date	Mean No. days fog
No. of years of record		44	44	109	109	109		109		105		79
January		50	41	8	3	115	(1982)	Nil	(a)	55	21/82	0.2
February		53	40	12	3	166	(1955)	Nil	(a)	87	17/55	0.3
March		57	42	20	4	145	(1934)	Nil	(a)	77	9/34	0.6
April		65	49	45	8	149	(1926)	Nil	(a)	67	30/04	0.9
May		72	53	124	14	308	(1879)	14	(1964)	76	17/42	1.3
June		78	60	183	17	476	(1945)	55	(1877)	99	10/20	1.4
July		78	60	174	18	425	(1958)	61	(1876)	95	29/87	1.6
August		74	57	137	17	318	(1945)	12	(1902)	74	14/45	1.0
September		68	54	80	14	199	(1923)	9	(1916)	52	14/84	0.3
October		59	49	55	11	200	(1890)	1	(1969)	55	1/75	0.4
November		54	46	21	6	73	(1984)	Nil	(1891)	39	29/56	0.2
December		51	44	14	4	81	(1951)	Nil	(a)	47	3/51	0.2
	Totals	..	..	**873**	**119**		..		..	..	..	**8.1**
Year	**Averages**	**63**	**50**	..	..		..		..	..	..	..
	Extremes	..	..	..	..	**476**	**(6/1945)**	**Nil**	**(a)**	**99**	**10/6/20**	..

(a) Various years.
NOTE: Figures such as 21/82, indicate, in respect of the month of reference, the day and year of occurrence. Bracketed figures indicate year of occurrence.

CLIMATIC DATA: HOBART, TASMANIA
(Lat. 42° 53′ S., Long. 147° 20′ E. Height above M.S.L. 54 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDY AND CLEAR DAYS

Month		Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (hPa)	Wind (height of anemometer 12 metres) Average (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amount evaporation (mm)	Mean No. days thunder	Mean No. cloudy days (a)	Mean No. clear days (b)
No. of years of record		99	76	96	(c)	(c)	(d)11	75	42	44
January		1,010.6	12.7	130	NNW	SE	142	1.0	10	1.9
February		1.012.9	11.7	121	NNW	SE	123	0.9	9	2.3
March		1,014.3	11.1	127	NW	SE	92	0.8	11	2.4
April		1,015.5	11.0	141	NW	NW	59	0.3	11	1.7
May		1,015.5	10.8	135	NW	NW	36	Nil	13	2.4
June		1,015.4	10.2	132	NW	NW	20	Nil	11	2.4
July		1,014.1	10.9	129	NNW	NW	24	Nil	10	2.0
August		1,012.8	11.1	140	NNW	NW	43	Nil	11	2.1
September		1,011.4	12.5	150	NNW	NW	59	0.1	10	1.5
October		1,010.5	12.6	140	NW	SE	90	0.4	12	1.0
November		1,009.9	12.8	135	NW	SE	121	0.6	12	1.3
December		1,009.4	12.5	122	NW	SE	144	0.8	12	1.1
	Totals	..	..	..	..	..	**953**	**4.9**	**132**	**22.1**
Year	**Averages**	**1,012.7**	**11.7**	..	**NW**	**SE**	..	..	..	..
	Extremes	..	..	**150**	..	..	..	..	..	..

(a) Mean numbers of days when cloud equalled or exceeded seven-eighths. (b) Mean number of days when cloud cover was less than or equal to one-eighth. (c) Years 1944–1988 inclusive. (d) Class A with Bird Guard.

CLIMATIC DATA: HOBART, TASMANIA—*continued*
(Lat. 42° 53′ S., Long. 147° 20′ E. Height above M.S.L. 54 metres)

TEMPERATURE AND SUNSHINE

Month		*Air temperature daily readings (°Celsius)* Mean max.	Mean min.	Mean	*Extreme air temperature (°Celsius)* Highest max.	Date	Lowest min.	Date	*Extreme temperature (°Celsius)* Lowest terrestrial min.	Date	Mean daily hours sunshine
No. of years of record		101	101	101		101		101	99		75
January		21.5	11.7	16.5	40.8	4/76	4.5	9/37	–0.8	19/97 *	7.7
February		21.6	11.9	16.7	40.2	12/99*	3.4	10/80*	–2.0	—/87 *	6.9
March		20.0	10.7	15.2	37.3	13/40	1.8	31/26	–2.5	30/02	6.2
April		17.1	8.8	12.9	30.6	1/41	0.6	14/63	–3.9	—/86 *	5.0
May		14.9	6.8	10.5	25.5	5/21	–1.6	30/02	–6.7	19/02	4.2
June		11.8	5.1	8.5	20.6	1/07	–2.8	25/72	–7.7	24/63	3.8
July		11.5	4.4	7.9	21.0	30/75	–2.8	11/81	–7.5	1/78	4.2
August		12.9	5.1	9.1	24.5	26/77	–1.8	5/62	–6.6	7/09	4.9
September		14.9	6.3	10.6	28.2	29/73	–0.6	16/97*	–7.6	16/26	5.7
October		16.9	7.6	12.2	33.4	24/14	0.0	12/89*	–4.6	(a)	6.3
November		18.5	9.1	13.8	36.8	26/37	1.6	16/41	–3.4	1/08	6.9
December		20.2	10.6	15.4	40.7	30/97*	3.3	3/06	–2.6	—/86 *	7.2
Year	**Averages**	**16.8**	**8.2**	**12.4**	..	..	..	..	..	..	**5.8**
	Extremes	..	..	..	**40.8**	**4/1/1976**	**–2.8**	**11/7/81 and 25/6/72**	**–7.7**	**24/6/1963**	..

(*a*) 1/1886 and 1/1899
NOTE: Figures such as 4/76, 9/37, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century.

HUMIDITY, RAINFALL AND FOG

Month		*Rel. hum (%)* 9 a.m. mean	3 p.m. mean	*Rainfall (millimetres)* Mean monthly	Mean No. of days of rain	Greatest monthly		Least monthly		Greatest in one day	Date	Mean No. days fog
No. of years of record		86	86	105	105	105		105		105		73
January		59	53	48	11	150	(1893)	4	(1958)	75	30/16	0.1
February		63	55	40	10	171	(1964)	3	(1914)	56	1/54	Nil
March		66	55	47	11	255	(1946)	7	(1943)	88	17/46	0.2
April		70	59	53	12	248	(1960)	2	(1904)	132	23/60	0.3
May		76	63	49	14	214	(1958)	4	(1913)	47	3/73	1.2
June		79	68	57	14	238	(1954)	2	(1979)	147	7/54	1.6
July		78	66	53	15	157	(1974)	4	(1950)	64	18/22	1.3
August		74	60	52	15	161	(1946)	8	(1892)	65	2/76	0.6
September		66	56	53	15	201	(1957)	10	(a)	156	15/57	0.2
October		62	56	63	16	193	(1947)	9	(1982)	66	4/06	0.1
November		60	55	56	14	188	(1885)	9	(b)	94	30/85*	0.1
December		59	58	57	13	206	(1985)	5	(c)	85	5/41	0.1
	Totals	..	..	**628**	**160**		..		..	..	..	**5.8**
Year	**Averages**	**68**	**59**	..	..		..		..	..	..	..
	Extremes	..	..	..	..	**255**	**(3/1946)**	**2**	**(d)**	**156**	**15/9/57**	..

(*a*) 1891 and 1951. (*b*) 1919 and 1921. (*c*) 1897,1915 and 1931. (*d*) 4/1904 and 6/1979.
NOTE: Figures such as 30/16, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century. Bracketed figures indicate year of occurrence.

CLIMATIC DATA: DARWIN AIRPORT, NORTHERN TERRITORY
(Lat. 12° 25′ S., Long. 130° 52′ E. Height above M.S.L. 31 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDY AND CLEAR DAYS

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (hPa)	Wind (height of anemometer 36 metres) Average (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean amount evaporation (mm)	Mean No. days thunder	Mean No. cloudy days (a)	Mean No. clear days (b)
No. of years of record	95	45	(c)29	49	49	(d)13	45	45	45
January	1,006.4	9.7	100	W	NW	185	15	21	0
February	1,006.4	11.1	96	W	NW	162	11	19	0
March	1,007.6	9.3	107	W	NW	172	11	16	1
April	1,009.6	9.7	117	SE	E	189	4	9	4
May	1,010.9	10.5	63	SE	E	200	0	5	9
June	1,012.6	10.7	67	SE	E	189	0	3	13
July	1,013.1	9.7	61	SE	E	201	0	3	16
August	1,012.6	9.7	65	SE	NW	203	0	2	15
September	1,012.1	11.0	67	ENE	NW	232	1	2	11
October	1,010.6	10.9	96	NE	NW	254	5	4	6
November	1,008.7	9.1	117	NW	NW	230	12	8	2
December	1,007.4	9.7	217	NW	NW	205	15	15	0
Year Totals	..	..	..	..	..	**2,422**	**74**	**105**	**77**
Year Averages	**1,009.8**	**10.1**	..	**SE**	**NW**	..	..	..	..
Year Extremes	..	..	**217**	..	..	..	..	..	..

(a) Mean number of days when cloud cover equalled or exceeded seven-eighths. (b) Mean number of days when cloud cover was less than or equal to one-eighth. (c) Several incomplete years. (d) Class A Pan.

TEMPERATURE AND SUNSHINE

Month	Air temperature daily readings (°Celsius) Mean max.	Mean min.	Mean	Extreme air temperature (°Celsius) Highest max.	Date	Lowest min.	Date	Extreme temperature (°Celsius) Lowest terrestrial min.	Date	Mean daily hours sunshine
No. of years of record	45	45	45	(a)100		(a)100				31
January	31.7	24.7	28.2	37.8	2/82*	20.0	20/92*	..	..	5.6
February	31.4	24.6	28.0	38.3	20/87*	17.2	25/49	..	..	5.9
March	31.8	24.4	28.1	38.9	(b)	19.2	31/45	..	..	6.6
April	32.6	23.9	28.3	40.0	7/83*	16.0	11/43	..	..	8.7
May	31.9	21.9	26.9	39.1	8/84*	14.2	28/67	..	..	9.5
June	30.4	19.8	25.1	39.0	17/37	12.1	23/63	..	..	9.9
July	30.3	19.2	24.8	36.7	17/88*	10.4	29/42	..	..	10.1
August	31.2	20.6	25.9	37.0	30/71*	13.6	11/63	..	..	10.2
September	32.4	23.0	27.7	38.9	20/82*	16.7	9/63	..	..	9.8
October	33.0	24.9	29.0	40.5	17/92*	19.4	8/66	..	..	9.4
November	33.1	25.2	29.2	39.6	9/84*	19.3	4/50	..	..	8.4
December	32.5	25.2	28.9	38.9	20/82*	18.3	4/60	..	..	7.2
Year Averages	**31.9**	**23.1**	**27.5**	..	..	..	..	..	..	**8.4**
Year Extreme	..	..	..	**40.5**	**17/10/1892**	**10.4**	**29/7/1942**	..	..	..

(a) Years 1882–1941 at Post Office; 1942–1981 at Aerodrome; 1967–1973 at Regional office; sites not strictly comparable. (b) 26/1883 and 27/1883.
NOTE: Figures such as 2/82*, 20/92*, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century.

CLIMATIC DATA DARWIN AIRPORT, NORTHERN TERRITORY—*continued*
(Lat. 12° 25′ S., Long. 130° 52′ E. Height above M.S.L. 31 metres)

HUMIDITY, RAINFALL AND FOG

Month		Rel. hum (%) 9 a.m. mean	Rel. hum (%) 3 p.m. mean	Rainfall (millimetres) Mean monthly	Mean No. of days of rain	Greatest monthly		Least monthly		Greatest in one day	Date	Mean No. days fog
No. of years of record		41	41	(a)45	(a)45	(a)116		(a)116		(a)116		45
January		82	70	409	21	906	(1981)	136	(1965)	296	7/97*	Nil
February		84	72	355	20	815	(1969)	103	(1959)	250	18/55	Nil
March		83	67	316	19	1,104	(1974)	88	(1978)	241	16/77	Nil
April		75	52	99	9	357	(1943)	1	(1946)	143	4/59	Nil
May		67	43	17	2	299	(1968)	Nil	*(b)*	58	23/79	Nil
June		63	39	2	Nil	41	(1973)	Nil	*(b)*	36	10/02	Nil
July		64	38	1	Nil	10	(1955)	Nil	*(b)*	43	12/00	1
August		68	41	6	1	84	(1947)	Nil	*(b)*	80	22/47	1
September		71	48	18	2	130	(1981)	Nil	*(b)*	71	21/42	Nil
October		71	53	72	6	339	(1959)	Nil	(1953)	95	28/56	Nil
November		74	59	142	12	371	(1964)	17	(1976)	120	19/51	Nil
December		77	65	224	16	665	(1974)	56	(1961)	277	25/74	Nil
	Total	..	..	**1,661**	**108**		..		..	..	..	**2**
Year	**Averages**	**73**	**54**	..	..		..		..	..	..	..
	Extremes	..	..	..	..	**1,014**	**(2/56)**	**Nil**	**(c)**	**296**	**25/12/1974**	..

(a) Highest or lowest at either Post Office, Aerodrome or Regional Office. Regional Office 1964–73 only. *(b)* Various years. *(c)* April to October. Various years.
NOTE: Figures such as 7/97*, indicate, in respect of the month of reference, the day and year of occurrence. Dates marked with an asterisk (*) relate to the nineteenth century. Bracketed figures indicate year of occurrence.

CLIMATIC DATA: CANBERRA, AUSTRALIAN CAPITAL TERRITORY
(Lat. 35° 19′ S., Long. 149° 11′ E. Height above M.S.L. 577 metres)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDY AND CLEAR DAYS

Month		Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (hPa)	Wind (height of anemometer 10 metres) Average (km/h)	Highest gust speed (km/h)	Prevailing direction 9 a.m.	Prevailing direction 3 p.m.	Mean evaporation (mm)	Mean No. days thunder	Mean No. cloudy days (a)	Mean No. clear days (b)
No. of years of record		35	(c)23	47	43	43	(d)20	47	47	47
January		1,012.1	6.1	121	NW	NW	259	3.9	8	7.3
February		1,013.8	5.3	104	SE	NW	205	3.5	8	6.1
March		1,016.1	4.7	111	SE	NW	172	1.9	9	6.8
April		1,018.9	4.2	106	NW	NW	109	1.1	7	6.7
May		1,019.9	4.5	104	NW	NW	70	0.5	9	6.6
June		1,020.9	4.2	96	NW	NW	48	0.2	10	6.2
July		1,020.4	4.9	102	NW	NW	53	0.1	8	7.1
August		1,018.5	5.6	113	NW	NW	79	0.8	8	6.7
September		1,017.4	6.0	107	NW	NW	110	1.5	8	7.6
October		1,015.1	6.4	121	NW	NW	157	2.5	9	5.9
November		1,012.7	6.6	128	NW	NW	195	3.5	9	5.1
December		1,011.0	6.8	106	NW	NW	261	3.7	8	6.7
	Totals	..	..	..	..	..	**1,718**	**23.2**	**101**	**78.8**
Year	**Averages**	**1,016.4**	**5.4**	..	**NW**	**NW**	..	..	..	**6.6**
	Extremes	..	..	**128**	..	..	..	..	..	..

(a) Mean number of days when cloud cover equalled or exceeded seven-eighths. *(b)* Mean number of days when cloud cover was less than or equal to one-eighth. *(c)* Recorded at Yarralumla, where a cup anemometer was installed up to 1980. *(d)* Class A Pan.

CLIMATIC DATA: CANBERRA, AUSTRALIAN CAPITAL TERRITORY—*continued*
(Lat. 35° 19′ S., Long. 149° 11′ E. Height above M.S.L. 577 metres)

TEMPERATURE AND SUNSHINE

	Air temperature daily readings (°Celsius)			*Extreme air temperature (°Celsius)*				*Extreme temperature (°Celsius)*		
Month	*Mean max.*	*Mean min.*	*Mean*	*Highest max.*	*Date*	*Lowest min.*	*Date*	*Lowest terrestrial min.*	*Date*	*Mean daily hours sunshine*
No. of years of record	47	47	47		47		47		36	*(a)*12
January	27.7	12.9	20.3	41.4	31/68	1.8	1/56	-0.4	1/56	9.7
February	26.9	12.9	19.9	42.2	1/68	3.0	16/62	-0.5	9/80	9.3
March	24.4	10.7	17.5	36.5	8/83	-1.1	24/67	-4.0	*(b)*	7.8
April	19.6	6.5	13.1	32.6	*(c)*	-3.6	*(d)*	-8.3	24/69	7.3
May	15.1	2.9	9.0	24.5	10/67	-7.5	30/76	-11.0	17/79	5.5
June	12.0	0.8	6.4	20.1	3/57	-8.5	8/57	-13.4	25/71	5.4
July	11.1	-0.3	5.4	19.7	29/75	-10.0	11/71	-15.1	11/71	5.7
August	12.8	0.8	6.8	24.0	30/82	-7.8	6/74	-13.0	3/79	6.7
September	15.9	2.9	9.4	28.6	26/65	-6.4	10/82	-10.7	10/82	7.3
October	19.1	5.9	12.5	32.7	13/46	-3.3	4/57	-7.0	1/82	8.3
November	22.5	8.4	15.5	38.8	19/44	-1.8	28/67	-6.3	28/67	8.9
December	26.0	11.1	18.5	38.8	21/53	1.1	18/64	-3.9	18/64	9.3
Year Averages	**19.4**	**6.3**	**12.9**	..	..	..	..	..	..	**7.6**
Year Extremes	..	..	..	**(e)42.2**	**1/2/68**	**-10.0**	**11/7/71**	**-15.1**	**11/7/71**	..

(a) Composite of Airport and city. *(b)* 30/58 and 24/67. *(c)* 12/68 and 4/86. *(d)* 27 and 28/78. *(e)* 42.8 recorded at Acton on 11/1/39.
NOTE: Figures such as 31/68, 1/56, indicate, in respect of the month of reference, the day and year of occurrence.

HUMIDITY, RAINFALL AND FOG

	Rel. hum (%)		*Rainfall (millimetres)*								
Month	*9 a.m. mean*	*3 p.m. mean*	*Mean monthly*	*Mean No. of days of rain*	*Greatest monthly*		*Least monthly*		*Greatest in one day*	*Date*	*Mean No. days fog*
No. of years of record	47	47	47	47	47		47		47		47
January	60	34	60	8	185	(1984)	1	(1947)	95	12/45	1.0
February	66	39	57	7	148	(1977)	Nil	(1968)	69	20/74	1.0
March	68	41	54	7	312	(1950)	1	(1954)	92	21/78	2.7
April	75	46	50	8	164	(1974)	1	(1980)	75	2/59	4.1
May	81	55	48	9	150	(1953)	Nil	(1982)	96	3/48	7.8
June	84	60	37	9	126	(1956)	4	(1979)	45	25/56	8.1
July	84	58	39	10	104	(1960)	4	*(a)*	35	10/57	7.8
August	78	53	49	12	156	(1974)	7	(1944)	48	29/74	5.2
September	72	49	52	11	151	(1978)	6	(1946)	43	8/78	3.9
October	65	47	69	11	161	(1976)	2	(1977)	105	21/59	3.0
November	60	40	62	9	135	(1961)	Nil	(1982)	68	19/86	1.3
December	57	34	49	8	215	(1947)	Nil	(1967)	87	30/48	0.7
Year Totals	..	..	**626**	**109**		..		..	..	..	**46.6**
Year Averages	**71**	**46**	..	..		..		..	..	..	..
Year Extremes	..	..	..	..	**312**	**(3/50)**	**Nil**	**(b)**	**105**	**21/10/59**	..

(a) 1970 and 1982. *(b)*12/67, 2/68, 5/82 and 11/82.
NOTE: Data shown in the above tables relate to the Canberra Airport Meteorological Office, except where otherwise indicated, and cover years up to 1987.
Figures such as 12/45, indicate, in respect of the month of reference, the day and year of occurrence.

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6

DEMOGRAPHY

For an historical perspective of Australia's demographic characteristics *see Year Book* No. 71.

The principal source of demographic data is the Census, which in recent times (since 30 June 1961) has been conducted at five-yearly intervals. The most recent was in 1986. Compulsory registration of births, deaths and marriages also provides valuable information, as does information compulsorily supplied by incoming and outgoing overseas travellers. In addition, various surveys are conducted from time to time on specific topics. Divorce data are compiled from court records; administrative records provide data on other aspects such as refugees, interstate migration etc.

Two important pieces of Government legislation in recent times which have had bearing on demographic matters were the repeal in 1967 of the provision in section 127 of the Constitution requiring the exclusion of Aboriginals in reckoning the numbers of people in the population, and the passing of the *Family Law Act 1975* which provided for a single ground for divorce—irretrievable breakdown of marriage—and for nullity of marriage on the ground that the marriage is void.

THE POPULATION OF AUSTRALIA

Size and Growth

ESTIMATED RESIDENT POPULATION AND COMPONENTS OF GROWTH

Year ended 30 June	*Population ('000)*	*Annual rate of growth (per cent)*		
		Natural increase	*Net migration*	*Total*
1972	13,303.7	1.24	0.58	1.81
1973	13,504.5	1.09	0.43	1.51
1974	13,722.6	0.99	0.61	1.61
1975	13,893.0	0.91	0.33	1.24
1976	14,033.1	0.87	0.15	1.01
1977	14,192.2	0.82	0.41	(a)1.13
1978	14,359.3	0.83	0.44	(a)1.18
1979	14,515.7	0.80	0.38	(a)1.09
1980	14,695.4	0.81	0.52	(a)1.24
1981	14,923.3	0.83	0.81	(a)1.55
1982	15,184.2	0.84	0.86	(a)1.75
1983	15,393.5	0.85	0.48	(a)1.38
1984	15,579.4	0.84	0.32	(a)1.21
1985	15,788.3	0.82	0.47	(a)1.34
1986	16,018.4	0.78	0.64	(a)1.46
1987	16,263.3	0.79	0.74	1.53
1988	16,538.2	0.77	0.92	1.69
1989	16,833.1	0.79	0.99	1.78

(a) The difference between the total and the sum of the component rates is due to distribution of the intercensal discrepancy.

The estimated resident population at 30 June 1989 was 16.8 million, an increase of 1.8 per cent over the previous year. The total increase of 294,900 comprised 131,300 from natural increase and 163,600 from overseas migration. This was the second consecutive year in which overseas migration has been the major component of population growth, and only the third in the last two decades.

The 1970s were characterised by a declining rate of natural increase due to the falling birth rate. At the beginning of the 1980s however, the birth rate rose slightly before resuming its downward trend.

Net overseas migration gain, moderate for most of the seventies, increased sharply at the end of the decade following changes in migration intake targets and Australia's acceptance of a large number of Indo-Chinese refugees as settlers. Very high intakes were recorded in 1980–81 and 1981–82, after which they fell back to previous levels. In the latter half of the 1980s there was a resurgence of overseas migration gains.

Throughout the last two decades overseas migration gains have been more volatile than natural increase and, because of their size, have set the pattern for trends in total population growth. As both natural increase and overseas migration declined, the total population growth rate dropped from 1.8 per cent at the beginning of the seventies, to 1.1 per cent by 1978–79. Then as overseas migration gains recovered, the growth rate rose. By 1981–82 it was back to 1.8 per cent. The subsequent slump in migration intake, however, resulted in lower total growth rates until the recent resurgence which has led to a population growth rate of 1.7 per cent in 1987–88 and 1.8 per cent in 1988–89.

Population Distribution

Most of the Australian population is concentrated in two widely separated coastal regions. By far the largest of these, in terms of area and population, lies in the south-east, stretching in an unbroken crescent from South Australia through Victoria, Tasmania and New South Wales to Queensland. The smaller of the two regions is in the south-west of Western Australia. Neither region ever extends inland by more than two or three hundred kilometres. They are separated by two to three thousand kilometres of sparsely populated country which makes up about three-quarters of the total land area. It comprises the whole of the Northern Territory and parts of all five mainland States.

In both coastal regions the population is further concentrated into capital cities, other major cities and towns. In June 1989, 71.2 per cent of the Australian population lived in the combined State and Territory capitals (including the national capital) and six other major cities of 100,000 persons or more (capital city statistical divisions and statistical districts). The very low population density figures for Australia (two persons per square kilometre) mask this pattern of population distribution.

With the continuing development of urban industrialisation in the 20th century, capital cities have been the consistent choice for settlement of the majority of overseas immigrants, as well as receiving centres in the general internal trend towards rural to urban migration which persisted until recent times. This trend towards increasing urbanisation continued until the mid 1970s, after which a slight decline has been recorded. At the 1986 Census 85.4 per cent of the population lived in urban areas. Between the 1976 and 1986 Censuses, the proportion of the population living in rural areas actually increased from 13.9 per cent to 14.5 per cent, while the proportion of State populations living in the capital cities of Sydney, Melbourne and Brisbane declined slightly. Parallel with this has been an emerging trend since the 1970s towards selective rapid growth of smaller coastal towns in Queensland and New South Wales which have favoured the development of retirement, recreation and tourist amenities.

Australia's two dominant population centres—Sydney (3.6 million) and Melbourne (3.0 million)—both in the south-east, accounted for 39.6 per cent of the total population in June 1989. The next largest city is Brisbane (1.3 million). Sydney and Melbourne have traditionally been the favoured ports of entry for overseas arrivals and are the capitals of the two most populous States—New South Wales and Victoria respectively. In these and every other State and Territory the capital city is the largest population centre. Most capitals are many times the size of the next largest town. All capitals, with the exception of the national capital (Canberra) are located on the coast.

URBAN-RURAL DISTRIBUTION OF POPULATION AT SELECTED CENSUS DATES AUSTRALIA(a)
(per cent(b))

Census year	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
				URBAN					
1921	67.8	62.3	52.1	60.0	59.3	50.5	36.2	—	62.1
1947	71.9	71.0	59.7	69.4	64.6	58.9	23.4	89.7	68.7
1954	82.6	81.3	73.0	74.5	71.0	65.9	65.9	93.3	78.7
1961	85.1	84.8	75.9	78.8	73.2	70.4	39.6	96.0	81.7
1966	86.4	85.5	76.4	82.4	75.7	70.3	53.4	96.1	82.9
1971	88.6	87.7	79.4	84.6	81.5	74.2	64.1	97.8	85.6
1976	88.7	87.9	80.2	84.9	83.5	74.9	66.4	98.4	86.0
1981	88.2	87.8	79.1	84.9	84.6	75.1	74.2	99.0	85.7
1986	87.9	88.1	78.9	84.6	84.7	74.5	72.0	99.1	85.4
				RURAL					
1921	31.6	37.3	47.5	39.4	39.1	49.2	62.1	99.7	37.4
1947	27.9	28.9	40.1	30.3	34.9	40.9	75.4	10.4	31.1
1954	17.2	18.4	26.8	25.2	28.7	33.9	32.7	6.7	21.0
1961	14.6	15.0	24.0	20.8	26.4	29.4	59.9	4.0	18.1
1966	13.4	14.4	23.5	17.5	23.9	29.6	46.1	3.9	16.9
1971	11.3	12.2	20.4	15.3	18.2	25.7	35.4	2.2	14.3
1976	11.1	12.1	19.7	15.0	16.3	24.9	33.0	1.6	13.9
1981	11.8	12.1	20.8	15.1	15.3	24.8	25.3	1.0	14.2
1986	12.0	11.9	21.0	15.3	15.0	25.4	27.8	0.9	14.5

(a) Census counts by State of enumeration. Excludes full-blood Aboriginals prior to 1961. *(b)* Urban and rural proportions do not add up to 100 per cent as the proportion of migratory population is not included.

ESTIMATED RESIDENT POPULATION OF CAPITAL CITIES, AUSTRALIA

	1971	*1976*	*1981*	*1986*	*1988*	*1989p*
			POPULATION (PERSONS)			
Sydney	2,935,937	3,143,750	3,279,500	3,472,700	3,596,000	3,623,600
Melbourne	2,503,022	2,723,700	2,806,300	2,931,900	3,002,300	3,039,100
Brisbane	869,579	1,000,850	1,096,200	1,196,000	1,240,300	1,272,400
Adelaide	842,693	924,060	954,300	1,003,800	1,023,700	1,036,700
Perth	703,199	832,760	922,040	1,050,400	1,118,800	1,158,400
Hobart	153,216	164,400	171,110	179,000	179,900	181,200
Darwin	38,885	44,232	56,478	74,800	72,900	72,800
Canberra*(a)*	159,003	226,450	246,500	281,000	297,300	302,500
(b)	142,925	206,550	226,450	257,850	272,500	276,900
Total	**8,205,534**	**9,060,202**	**9,532,428**	**10,189,600**	**10,531,200**	**10,686,700**
		PROPORTION OF STATE POPULATION (PER CENT)				
Sydney	63.8	63.4	62.7	62.8	63.1	62.9
Melbourne	71.5	71.5	71.1	70.1	70.4	70.4
Brisbane	47.6	47.8	46.7	45.6	45.2	45.0
Adelaide	71.8	72.5	72.3	72.6	72.7	72.8
Perth	68.2	70.7	70.9	72.0	72.4	72.8
Hobart	39.2	39.9	40.1	40.1	40.1	40.2
Darwin	45.0	45.0	46.1	48.4	46.8	46.6
Canberra*(b)*	99.2	99.4	99.5	99.6	99.6	99.6
Total	**64.3**	**64.6**	**63.9**	**63.6**	**63.7**	**63.6**

(a) Canberra Statistical District. *(b)* Excluding Queanbeyan.

After New South Wales and Victoria, which had populations of 5.8 million and 4.3 million respectively at 30 June 1989, the State populations were, in order of size, Queensland (2.8 million), Western Australia (1.6 million), South Australia (1.4 million), Tasmania (0.5 million), the Australian Capital Territory (0.3 million) and the Northern Territory (0.2 million). The capital city of the Northern Territory, Darwin, is the major population centre outside the south-eastern and south-western coastal regions. Its population in 1989 was 72,800.

ESTIMATED RESIDENT POPULATION OF AUSTRALIA, STATES AND TERRITORIES

30 June	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
1971	4,725,503	3,601,352	1,851,485	1,200,114	1,053,834	398,073	85,735	151,169	13,067,265
1976	4,959,588	3,810,426	2,092,375	1,274,070	1,178,342	412,314	98,228	207,740	14,033,083
1981	5,234,889	3,946,917	2,345,208	1,318,769	1,300,056	427,224	122,616	227,581	14,923,260
1986	5,531,526	4,160,856	2,624,595	1,382,550	1,459,019	446,473	154,421	258,910	16,018,350
1987	5,612,244	4,208,946	2,676,765	1,394,154	1,500,507	447,941	156,674	266,088	16,263,319
1988	5,701,525	4,261,945	2,743,765	1,408,255	1,544,806	448,457	155,866	273,534	16,538,153
1989	5,771,946	4,321,484	2,834,097	1,424,647	1,594,745	451,138	156,323	278,705	16,833,085

Demographic factors currently acting on the relative size of the States are above-average rates of natural increase in Western Australia and the two Territories, above-average per capita overseas migration gains in New South Wales and Western Australia and high per capita interstate migration gains in Queensland and Western Australia. State population growth rates in the year ended June 1989 were, in order of size, Queensland (3.29 per cent), Western Australia (3.23 per cent), the Australian Capital Territory (1.89 per cent), Victoria (1.40 per cent), New South Wales (1.24 per cent), South Australia (1.17 per cent), Tasmania (0.60 per cent) and the Northern Territory (0.29 per cent). The growth rate for Australia as a whole was 1.78 per cent.

Age/Sex Profile

The sex ratio of the population is expressed as the number of males per 100 females. This ratio declines with age: it is about 105 at birth, but, in the absence of migration, 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. From then on, due to continuing mortality differentials in favour of females, the female population begins to exceed males and this excess increases towards old age. The overall sex ratio of the population has been declining since the 1950s as the overseas migration intake has become less male dominated (see Migration section below). In 1989 the Australian population had 99.7 males for every 100 females.

The age distribution of the population is shown in the form of an age-sex pyramid, comparing the years 1971 and 1989. The low birth rates of the depression years of the 1930s, the deaths of defence personnel during World War II, the prolonged 'baby boom' from the end of World War II to the early 1960s, the declining birth rate of the 1970s and 1980s are all reflected in the profile. Tapering of the pyramid from ages 0 to 40, which was still evident in 1971, has now completely disappeared.

The median age of the population at 30 June 1989 was 31.9 years. It has been rising consistently since the beginning of the 1970s as a result of the lower birthrates as well as lower mortality rates at most ages. The proportion of the population aged 65 years and over has risen from 8.3 per cent in 1971 to 11.0 per cent in 1989.

As a consequence of changes in the age distribution, the aged-dependency ratio (population aged 65 and over per 100 population of working ages 15–64) has increased from 13.2 in 1971 to 16.5 in 1989, while the child-dependency ratio (population aged 0–14 per 100 population of working ages) has declined sharply from 45.5 to 33.0 during the same period. The combined effect is that the total dependency ratio has declined from 58.8 in 1971 to 49.5 in 1989.

SEX RATIOS, PERCENTAGE AGE DISTRIBUTION AND MEDIAN AGES OF THE POPULATION, AUSTRALIA

	Sex ratios(a)—				
30 June	*Ages 15–24*	*Ages 15–44*	*All ages*	*Aust. born*	*O'seas born*
1971	103.7	105.6	101.1	98.0	114.3
1976	103.2	104.3	100.4	97.8	109.5
1981	103.3	103.4	99.6	97.4	107.5
1986	104.1	103.1	99.8	98.1	106.2
1987	104.1	102.9	99.7	98.1	105.8
1988	104.1	102.8	99.7	98.1	105.5
1989	104.3	102.8	99.7	p98.2	p105.3
	Per cent of population aged—				
30 June	*0–14*	*15–44*	*45–64*	*65+*	*Median ages(b)*
1971	28.7	43.0	20.0	8.3	27.5
1976	27.0	44.1	20.0	8.9	28.4
1981	25.0	46.1	19.2	9.7	29.6
1986	23.1	47.3	19.1	10.5	31.1
1987	22.6	47.6	19.0	10.7	31.3
1988	22.3	47.8	19.0	10.9	31.6
1989	22.1	47.9	19.0	11.0	31.9

(a) Males per 100 females. *(b)* The median age is the age at which half of the population is older and half is younger.

DEPENDENCY RATIOS(a): SELECTED YEARS 1971–89

Age group	*1971*	*1976*	*1981*	*1986*	*1987*	*1988*	*1989*
0–14 years	45.53	42.11	38.24	34.78	33.98	33.40	32.98
65 years and over	13.25	13.93	14.93	15.81	16.07	16.27	16.49
Total	**58.78**	**56.04**	**53.17**	**50.59**	**50.05**	**49.67**	**49.47**

(a) A dependency ratio is the ratio of the dependant population (aged 0–14 and 65 and over) per 100 population of working ages (15–64 years).

Marital Status

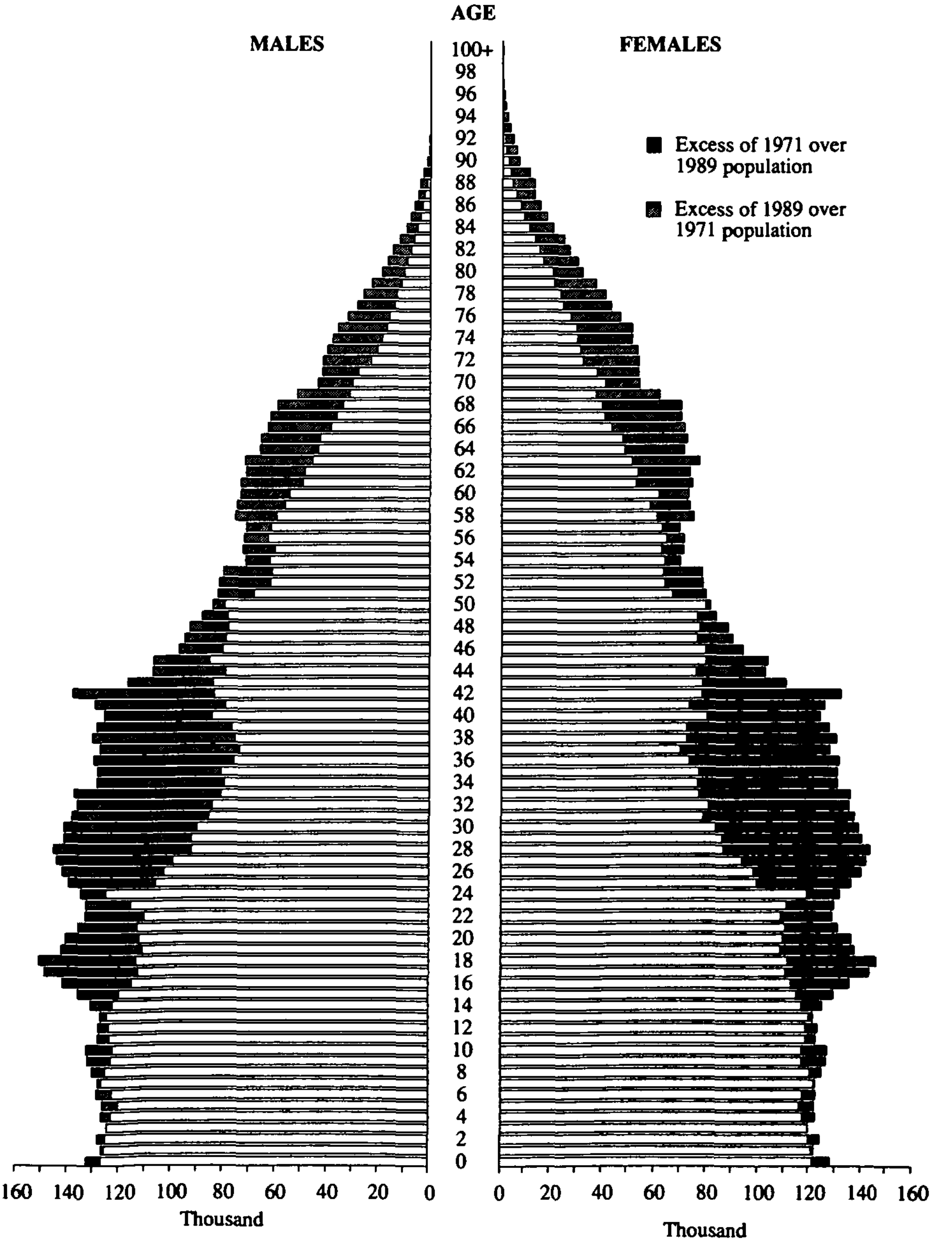
Between 1976 and 1989 total population aged 15 and over increased by 28.0 per cent. Of these, numbers of persons never married, married, widowed and divorced increased by 49.8, 14.9, 16.8 and 188.9 per cent respectively.

The disproportionate increase in the population of divorced persons is a reflection of the increase in divorce following introduction of the Family Law Act in 1975. However, since the beginning of the 1980s there has been a steady decline in the rate of growth of the divorced population.

Females exceed males in all categories excepting the never married. This arises principally from mortality differences in the higher age groups. The effect is particularly noticeable in the widowed category where females far out-number males.

In the never married category males exceed females because of higher sex ratios at younger ages and also because of the customary difference in age between bride and groom at first marriage.

ESTIMATED RESIDENT POPULATION OF AUSTRALIA, 30 JUNE 1971 AND 1989



ESTIMATED RESIDENT POPULATION AGED 15 AND OVER BY MARITAL STATUS AND SEX, AUSTRALIA ('000)

	Never Married	*Married(a)*	*Widowed*	*Divorced*	*Total*
1976—					
Males	1,508.2	3,344.2	134.3	104.7	5,091.5
Females	1,094.8	3,354.9	576.1	128.8	5,154.5
Persons	2,602.9	6,699.3	710.4	233.4	10,246.0
1981—					
Males	1,739.0	3,477.7	139.1	187.9	5,543.7
Females	1,310.8	3,487.6	622.2	233.5	5,654.0
Persons	3,049.8	6,965.3	761.3	421.3	11,197.7
1986—					
Males	2,005.8	3,692.5	144.1	261.7	6,104.1
Females	1,534.2	3,704.3	654.3	322.0	6,214.7
Persons	3,540.0	7,396.7	798.4	583.7	12,318.8
1989p—					
Males	2,196.0	3,841.9	151.1	301.3	6,490.3
Females	1,702.1	3,854.1	678.7	372.9	6,607.8
Persons	3,898.1	7,695.9	829.9	674.3	13,098.1

(a) Includes 'married but permanently separated'.

Birthplace

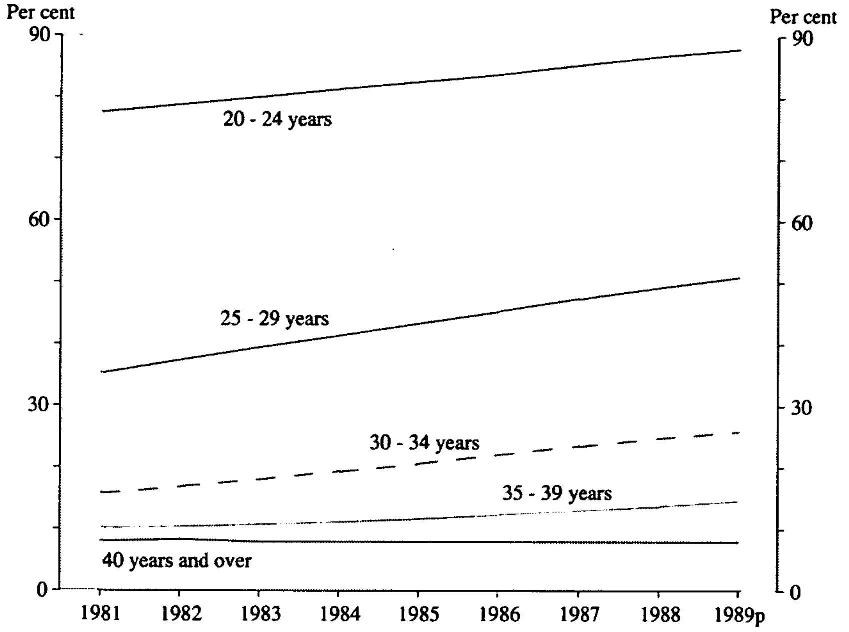
At the 1947 Census the proportion of the population (excluding Aboriginals) born in Australia had risen to its highest level (90.2 per cent) since the beginning of European settlement and 97.9 per cent of the Australian population were either born in Australia or the United Kingdom, Ireland or New Zealand. In that Census the largest non-British overseas-born group, the Italians, comprised only 0.4 per cent of the population (33,600), while the number of overseas-born Chinese had fallen to 6,400.

Since 1947, not only has the decline of the overseas-born population been reversed, but significant changes have taken place in the composition of that group. The progressive removal of immigration restrictions based on country of origin, race or colour between 1949 and 1973, together with the extension of assisted migration schemes to some non-British groups and refugees, have ensured a greater diversity of ethnic origin among the Australian population (*see also* section on Overseas Migration). The relative size of overseas-born groups from the United Kingdom, Eire and New Zealand combined, increased only slightly as a proportion of the total population between 1947 and 1989, from 7.7 per cent to 8.8 per cent. However, overseas-born persons from other countries increased from 2.1 per cent to 13.4 per cent during the same period. Overseas countries of birth contributing 0.1 per cent or more of the total population—apart from the United Kingdom, Eire and New Zealand—increased in number from 4 in 1947 to over 30 in 1989.

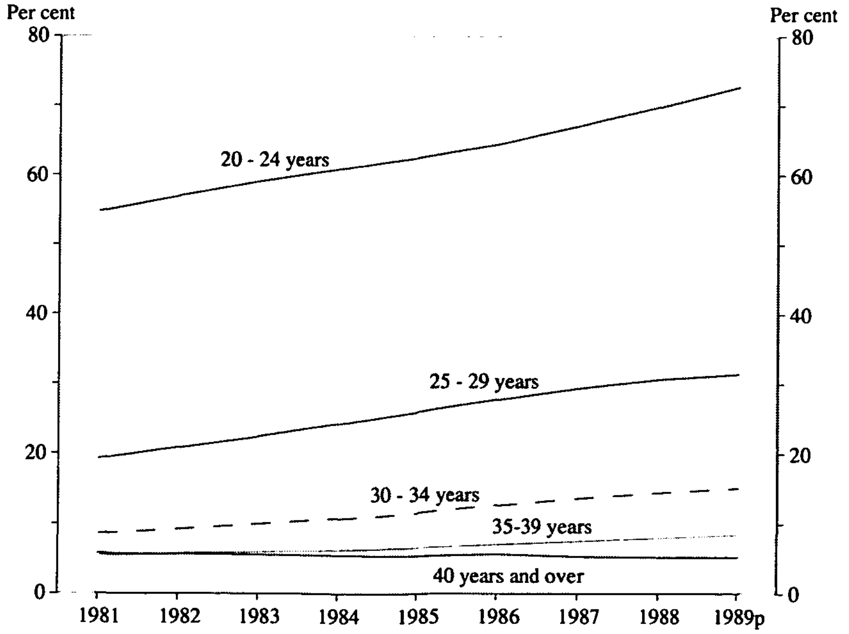
The largest overseas-born group at the present time remains those born in the United Kingdom and Ireland, having risen to 1,208,300 or 7.2 per cent of the population in 1989. By comparison, the second largest overseas-born group, Italians, comprised only 1.6 per cent of the Australian population in 1989 (267,600). Seven of the first nine largest overseas-born groups are European, the exceptions being New Zealand which comprised 1.6 per cent of the population and ranked second in 1989, and Vietnam which ranked seventh. Although Europe remains the region of origin of the majority of the overseas-born population, the number of European-born persons has declined as a proportion of the total Australian population from 16.5 per cent in 1976 to 14.1 per cent in 1989, while persons

PROPORTION OF PERSONS NEVER MARRIED, AUSTRALIA, AT 30 JUNE

MALES



FEMALES



born in other regions have increased their share. Between 1976 and 1989, the European-born population increased by only 60,400 compared with an increase of 482,200 in the Asian-born (including the Middle East) group.

The proportion of the Australian population born in Asia has increased continually from 0.3 per cent in 1947 to 4.3 per cent in 1989. As recently as 1966, however, only two Asian birthplace groups had populations amounting to more than 0.1 per cent of the Australian population, namely China and India. By 1989 this number had increased to fourteen. Sources of the largest Asian-born populations in 1989 were Vietnam (108,270), Lebanon (70,640), Malaysia (69,880), Philippines (60,320), India (57,440), China (50,200) and Hong Kong (46,840), comprising 0.6, 0.4, 0.4, 0.4, 0.3, 0.3 and 0.3 per cent of the Australian population respectively.

In June 1989 the median age of the overseas-born population was 41.6 years, ten years older than the median (31.9 years) for the population as a whole. The median age of the Australian-born population was 28.4 years. Overseas-born population groups from recent source countries e.g. Lebanon, South-East Asia, South America and South Africa are noticeably younger than those from traditional sources—the United Kingdom and Europe.

At the 1986 Census, 77.6 per cent of the population was born in Australia. Of these, 74.9 per cent reported Australia as the birthplace of both their parents. This implies that 58.1 per cent of the total population of Australia are at least second generation Australians. A further 13.7 per cent of the Australian-born population (10.6 per cent of the total population) had one parent born in Australia. Conversely, 41.9 per cent of the total population were either born overseas or had at least one parent born overseas.

BIRTHPLACE OF PARENTS OF AUSTRALIAN-BORN PERSONS, AUSTRALIA, CENSUS 1986

Birthplace of parents	*Numbers*	*Percentage*
Both parents born in Australia	9,070,739	74.9
One parent born in Australia, one born overseas or not stated	1,657,548	13.7
Other	1,382,169	11.4
Total	**12,110,456**	**100.0**

Citizenship

The grant of citizenship is controlled by the *Australian Citizenship Act 1948*. Prior to 26 January 1949, aliens who were naturalised became British subjects but with the introduction of the Act, all such persons automatically became Australian citizens.

Citizenship may be acquired by birth in Australia provided that at the time of birth one of the parents is an Australian citizen or legal resident of Australia, by birth abroad to an Australian parent, or by grant of citizenship to a person resident in Australia under conditions prescribed in the Act. 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 an adequate knowledge of English and of the responsibilities and privileges of citizenship, and intend to reside permanently in Australia.

At the 1981 Census, 88.7 per cent of the population were Australian citizens, with 11.9 per cent of these being born overseas. At the 1986 Census the proportion of the population with Australian citizenship was identical to the 1981 level, but the share of those born overseas increased to 12.5 per cent.

COUNTRY OF CITIZENSHIP, AUSTRALIA, 1981, 1986

	Persons		*Percentage*	
Country	*1981*	*1986*	*1981*	*1986*
Australia—				
Born in Australia	11,393,861	12,110,456	78.2	77.6
Born overseas	1,537,212	1,726,642	10.5	11.1
Other	1,413,654	1,331,335	9.7	8.5
Not stated	231,603	433,723	1.6	2.8
Total	**14,576,330**	**15,602,156**	**100.0**	**100.0**

Religion

Details on religious affiliation have been collected in all Australian censuses. However, since the 1933 Census, it has been clearly stated on the census form that answering the question on religion is not obligatory. By 1986, 25.0 per cent of the population described themselves as either having 'no religion' or did not answer the question.

Census data show that the Australian population is predominantly Christian with the majority associating themselves with the two major groups, the Catholic Church and the Church of England (26.1 per cent and 23.9 per cent respectively at the 1986 Census).

MAJOR RELIGIOUS GROUPS, AUSTRALIA, SELECTED CENSUS DATES
(per cent)

Year	*Church of England*	*Catholic*	*Other Christian*	*Total Christian*	*Non-Christian*	*Not stated or no religion*	*Total*
1971	31.0	27.0	28.2	86.2	0.8	13.1	100.0
1976	27.7	25.7	25.2	78.6	0.9	20.5	100.0
1981	26.1	26.0	24.3	76.4	1.4	22.3	100.0
1986	23.9	26.1	23.0	73.0	2.0	25.0	100.0

The remainder of the Christian population, amounting to 23 per cent of the total population at the 1986 Census, is dispersed between several other groups, with only three denominations consisting of more than 2.0 per cent of the population: the Uniting Church (7.6 per cent), Presbyterian (3.6 per cent) and Orthodox (2.7 per cent).

There has been a slight increase in the proportion of persons of non-Christian religions since 1981, from 1.4 per cent to 2.0 per cent in 1986. At the 1986 Census, Muslims comprised 35.0 per cent of the non-Christian response, Hebrews 20.0 per cent and Buddhists 25.0 per cent.

Households

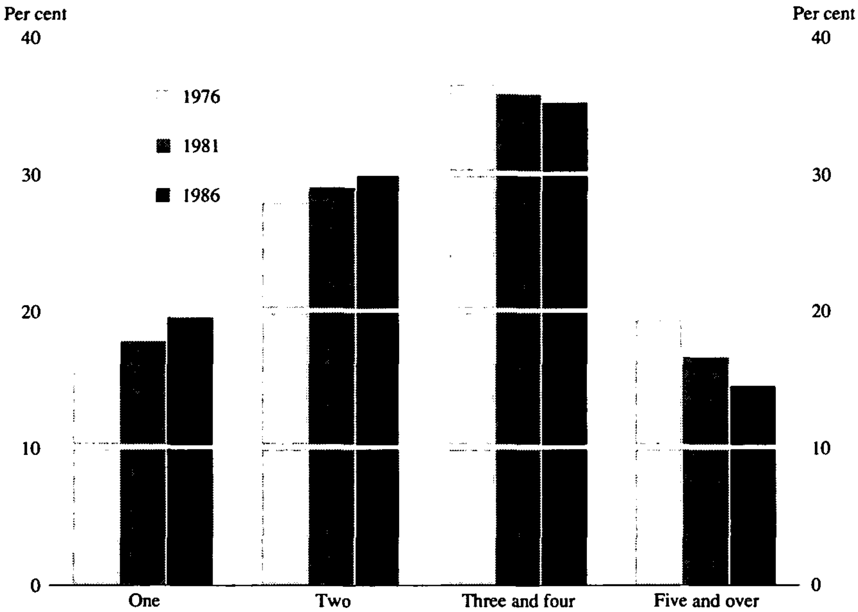
The incidence of household formation in Australia has continued to exceed population growth rates, with the average number of persons per household declining from 3.3 in 1971 to 2.9 in 1986. Much of the decline in the number of persons per household can be attributed to reductions in completed family size and changing social attitudes. There has been continuing growth in one and two-person households, rising from 47.2 per cent of all households in 1981 to 49.5 per cent at the 1986 Census.

Only a small proportion of households include more than one family, some 3 per cent at the 1981 Census, which declined further to 2.4 per cent at the 1986 Census. The 1986 Census indicated that 47.6 per cent of total families had no dependent children and 52.4 per cent did have dependent children. Among families with dependent children, 35.9 per cent had one child and 64.1 per cent had two or more dependent children. Single parent families comprised 7.9 per cent of total families and were mostly composed of parent and dependent children (76.3 per cent); the balance included an additional adult family member (23.7 per cent).

POPULATION IN PRIVATE HOUSEHOLDS, AUSTRALIA

Year	*Persons in private households*	*Private households*	*Persons per private household*
1971	12,155,386	3,670,554	3.31
1976	12,942,708	4,140,521	3.12
1981	13,918,445	4,668,909	2.98
1986	14,920,230	5,187,422	2.88

PROPORTION OF HOUSEHOLDS BY SIZE(a), AUSTRALIA



(a) Persons per household

FAMILY TYPE AND COMPOSITION, AUSTRALIA, 1986

Family Type	*No.*	*Per cent*
Families without dependent children		
Couple	1,271,872	30.6
Couple and adult family member	449,208	10.8
Related adults	258,768	6.2
Families with dependent children		
Couple and 1 dependent child	403,298	9.7
Couple and 2 or more dependent children	1,072,968	25.8
Couple and 1 dependent child and adult family member	206,496	5.0
Couple and 2 or more dependent children and adult family member	171,230	4.1
Single parent and 1 dependent child	124,166	3.0
Single parent and 2 or more dependent children	123,016	3.0
Single parent and 1 dependent child and adult family member	48,054	1.2
Single parent and 2 or more dependent children and adult family member	28,935	0.7
Total families	**4,158,011**	**100.0**

VITAL STATISTICS

Registration of vital events, i.e. births, deaths and marriages, has been compulsory throughout Australia since 1856. The total number of these registrations 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.

Births

Current fertility levels in Australia are lower than at any time since records began. In 1989 the crude birth rate was 14.9 per 1,000 population and the total fertility rate was 1.85 per woman, showing a continuation of a long-term decline in fertility. Australia's current fertility rates, however, remain higher than in several other similarly 'more developed' countries in Europe, North America and Japan.

CRUDE BIRTH RATES AND TOTAL FERTILITY RATES, SELECTED LOW FERTILITY COUNTRIES

	Crude birth rate		*Total fertility rate(a)*	
Country	*1970*	*1980s*	*1970*	*1980s*
Australia	20.6	14.9 (1989p)	2.86	1.85 (1989)
Canada	17.4	14.5 (1989p)	2.26	1.66 (1987)
France	16.7	13.8 (1988p)	2.47	1.82 (1988p)
Federal Republic of Germany	13.3	11.0 (1988p)	2.01	1.40 (1988p)
Italy	16.8	9.9 (1988)	2.37	1.33 (1988p)
Japan	18.8	10.1 (1989p)	2.07	1.66 (1988)
New Zealand	22.1	17.4 (1989p)	3.16	2.11 (1989p)
Spain	19.6	10.8 (1987)	2.87	1.53 (1986)
United Kingdom	16.2	13.8 (1988p)	2.38	1.83 (1988p)
United States of America	18.2	15.9 (1988p)	2.46	1.87 (1987)

(a) The total fertility rate is the sum of the age-specific birth rates. It represents the number of children that would be born to a female who experienced, throughout her child-bearing life, the age specific rates for the years shown.
Source: "Dix-huitieme Rapport sur la situation demographique de la France". Population No. 4–5, 1989 and other demographic periodicals for specific countries.

Despite an overall fertility decline, the number of births has shown an increasing trend during the 1980s because of increasing numbers of women of reproductive age. The number of births in 1989 (250.9 thousand) was the highest since 1973, though not as great as the record number of 276.4 thousand in 1971.

Women now prefer to commence child-bearing later and complete their families earlier than previous generations. The proportion of first nuptial confinements occurring in the first two years of marriage is continuing to decline. For women married in 1971 the proportion was 46.5 per cent, but for women married in 1987 it had fallen to 32.1 per cent. This postponement of child-bearing in marriage is having a cumulative effect in the context of the rising median age at marriage (21.4 years in 1971 and 25.2 years in 1987).

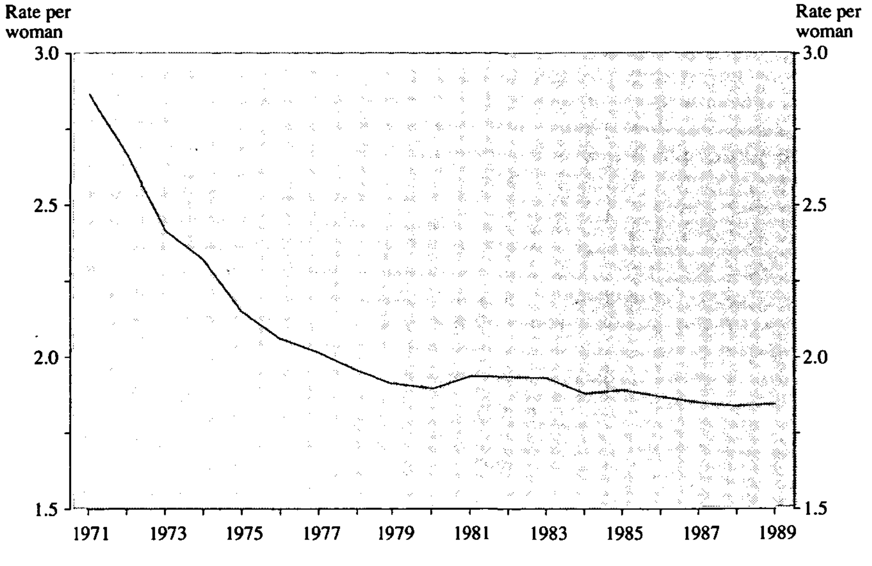
In the 1970s, fertility declines became obvious across all age-groups, falling rapidly between 1971 and 1980, and marginally since then. This decline has been attributed to demographic, social, economic and attitudinal changes of the 1970s, which individually or collectively influenced fertility behaviour during this period. Between 1971 and 1989, the total fertility rate declined by 36 per cent. The largest declines in age-specific fertility rates occurred to younger women aged 15–29 years, in particular the 20–24 age group. Women were deferring their first birth to the middle range of their reproductive years and reducing child-bearing at older ages. In 1971, 46.6 per cent of births occurred to women aged 15–24. By 1989, the corresponding figure was 26.3 per cent. The proportion of births occurring to women aged 25–34 in 1971 was 45.9 per cent, whereas in 1989 it was 64.1 per cent. Women in the 25–29 age group maintained the highest fertility rates.

AGE-SPECIFIC BIRTH RATES AND TOTAL FERTILITY, AUSTRALIA

	Age group (years)							
Period	*15–19(a)*	*20–24*	*25–29*	*30–34*	*35–39*	*40–44*	*45–49(b)*	*Total fertility*
AVERAGE ANNUAL RATES								
	—per '000 women—							per woman
1971–75	48.0	154.0	166.9	85.0	33.7	8.5	0.6	2.484
1976–80	30.7	116.4	143.9	73.8	23.8	4.8	0.3	1.968
1981–85(c)	25.7	100.8	144.5	82.0	25.4	4.4	0.3	1.915
ANNUAL RATES								
	—per '000 women—							per woman
1981	28.2	107.5	145.2	77.6	24.5	4.5	0.3	1.938
1982	27.5	104.0	144.9	80.6	25.6	4.6	0.3	1.936
1983	26.6	102.7	145.9	81.5	25.0	4.4	0.2	1.931
1984	23.6	96.0	143.0	83.0	25.6	4.4	0.3	1.879
1985	22.5	94.1	143.4	87.2	25.4	4.4	0.2	1.891
1986	21.8	90.0	141.9	88.7	27.2	4.3	0.2	1.870
1987	20.6	85.2	139.8	90.6	28.9	4.8	0.3	1.851
1988	20.2	81.8	137.2	93.4	30.5	4.6	0.2	1.840
1989	20.6	78.6	136.2	96.0	32.5	5.0	0.2	1.846

(a) Includes births to mothers aged less than 15. *(b)* Includes births to mothers aged 50 and over. *(c)* Rates are adjusted for late registrations of births in New South Wales in 1984.

TOTAL FERTILITY RATE, AUSTRALIA



MARRIED FEMALES UNDER 45 YEARS OF AGE AT TIME OF MARRIAGE: YEAR MARRIED AND TIMING OF FIRST NUPTIAL CONFINEMENT

	Percentage of married females under 45 years of age at time of marriage							
		Having the first nuptial confinement before the end of a given year of marriage duration(a)						Number of brides aged under 45 years
Year of marriage	*Premaritally pregnant(b)*	*1*	*2*	*3*	*4*	*5*	*10*	
		—cumulative per cent—						
1971	19.8	28.1	46.5	60.6	70.6	77.0	87.0	112,817
1972	18.0	25.5	43.7	57.9	68.0	74.9	86.2	109,007
1973	15.6	22.8	41.0	54.7	64.8	72.0	84.5	107,563
1974	13.4	20.6	38.0	51.5	61.7	69.0	82.4	105,759
1975	12.2	19.3	36.9	50.5	60.8	68.5	82.6	98,951
1976	10.9	18.0	35.0	47.5	57.2	64.5	76.2	103,108
1977	11.1	17.6	34.1	46.9	57.0	64.5	77.4	98,551
1978	11.3	17.7	34.6	47.8	57.8	65.1	77.7	96,859
1979	11.3	17.7	35.4	48.8	58.7	65.7	78.2	98,286
1980	11.5	17.9	35.7	48.9	58.6	65.5	—	103,019
1981	11.3	17.9	33.5	48.3	57.8	64.6	—	107,855
1982	10.4	16.8	33.7	46.0	55.3	61.8	—	111,295
1983	9.9	16.0	33.0	45.8	55.0	61.6	—	108,931
1984	10.1	16.6	34.8	48.1	57.8	64.9	—	102,785
1985	9.2	15.4	32.3	44.5	53.5	—	—	109,377
1986	8.3	15.0	31.6	43.8	—	—	—	108,442
1987	7.8	15.4	32.1	—	—	—	—	107,668
1988	8.0	15.8	—	—	—	—	—	110,163

(a) Includes premarital pregnancies. *(b)* Premaritally pregnant comprises wives who delivered their first child within marriage duration of 0–7 completed months.

TOTAL CONFINEMENTS BY NUPTIALITY AND PREVIOUS ISSUE TO THE CURRENT MARRIAGE OF MOTHER (NUPTIAL BIRTHS), AUSTRALIA

		Married mothers with number of previous issue to the current marriage of—							
Period	*Ex-nuptial confinements*	*0*	*1*	*2*	*3*	*4*	*5 or more*	*Not stated*	*Total*
		ANNUAL AVERAGES							
1971–1975	24,299	88,120	74,641	36,914	15,216	6,006	5,765	12	250,973
1976–1980	24,851	77,877	69,291	34,288	11,119	3,332	2,451	15	223,224
1981–1985	34,248	82,279	70,089	34,399	11,354	3,093	1,918	103	237,483
		ANNUAL TOTALS							
1981	30,956	82,476	67,627	35,445	11,750	3,282	1,993	6	233,535
1982	32,679	83,300	69,963	34,670	11,631	3,193	2,016	—	237,452
1983	35,335	83,466	70,427	34,081	11,343	3,108	1,878	476	240,114
1984*(a)*	34,337	79,295	69,312	33,027	10,802	3,013	1,825	32	231,643
1985*(a)*	37,933	82,860	73,114	34,774	11,246	2,867	1,877	—	244,671
1986	40,580	80,563	70,017	33,937	10,955	2,904	1,723	20	240,699
1987	43,418	80,241	68,730	33,472	10,793	2,873	1,742	—	241,269
1988	46,293	79,841	68,432	33,419	10,650	2,856	1,699	3	243,193
1989	50,321	81,355	67,459	33,066	10,856	2,874	1,688	3	247,622

(a) These figures have been affected by late registration in New South Wales.

Concurrent with the downward movement that has occurred in the levels of fertility, the family formation patterns of couples have changed. An increasing proportion of total births has now been occurring outside marriage, and for those occurring within marriage, concentration has been on the first and second order births.

Confinements resulting in ex-nuptial births have increased continually as a proportion of total confinements over the past two decades, rising from 9.3 per cent in 1971 to 20.3 per cent in 1989. The median age of ex-nuptial mothers has been lower than that at first nuptial confinement throughout the period and it seems likely that ex-nuptial births are predominantly first order births, though birth order data are not available for ex-nuptial births.

The proportion of females having three or more children in their marriage is continuing to decline. The proportion of nuptial confinements that produced a fourth or higher order birth has declined from 22.5 per cent in 1971 to 7.8 per cent in 1989. In the same year (1989) 75.4 per cent of nuptial confinements resulted in first or second children.

Deaths

In comparison with other countries, Australia ranks amongst those with the lowest mortality levels and the highest expectations of life.

EXPECTATION OF LIFE AT BIRTH AND INFANT MORTALITY RATES IN SELECTED LOW MORTALITY COUNTRIES, RECENT YEARS

	Infant mortality		*Life expectancy at birth*		
Country	*Rate*	*Year*	*Males*	*Females*	*Year*
Australia	8.0	1989	73.3	79.6	1989
Canada	7.3	1987	73.3	80.2	1987
France	7.7	1988p	72.6	81.1	1987
Federal Republic of Germany	8.2	1988p	72.3	79.1	1988
Italy	9.5	1988p	72.6	79.2	1987
Japan	4.8	1988	75.8	81.9	1988
New Zealand	10.8	1988	71.1	77.5	1986
Spain	9.0	1987	73.1	79.7	1985
United Kingdom	9.0	1988p	72.5	78.2	1988
United States	9.9	1988p	71.6	78.6	1987

Source: "La Conjoncture demographique: l'Europe et les pays developpes d'Outre-Mer" Population No. 4–5, 1989, World Health Statistics Annual, WHO Geneva 1989 and other demographic periodicals for specific countries.

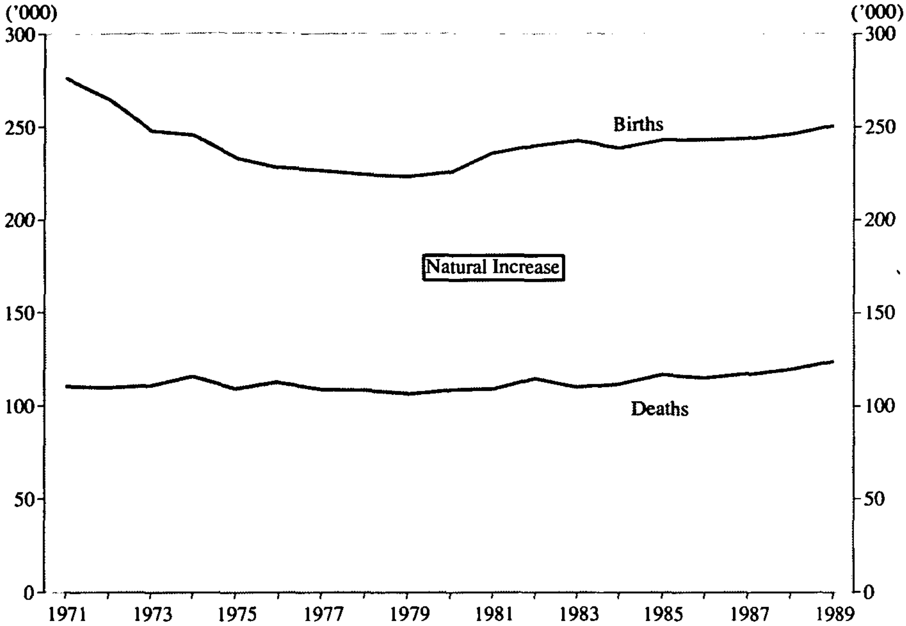
The number of deaths in 1989 was 124,232, an increase of 3.6 per cent over the previous year which, in the context of the crude death rate, resulted in a slight increase from 7.25 to 7.38 per thousand population. Generally, however, the current trend is towards a levelling of the crude death rate following two decades of consistent falls.

Mortality trends, as measured by the crude death rate, are distorted by changes in the age structure of the population over time. Australian crude death rates standardised for age show a considerably greater decline in mortality levels since the early 1970s and instead of a current levelling off, a continuation of this decline. Using the age structure of the estimated resident population of persons as at 30 June 1981 as the standard, the adjusted death rate fell from 12.0 per thousand in 1971 to 8.5 per thousand in 1989 for males and from 7.3 to 5.0 per thousand for females during the same period.

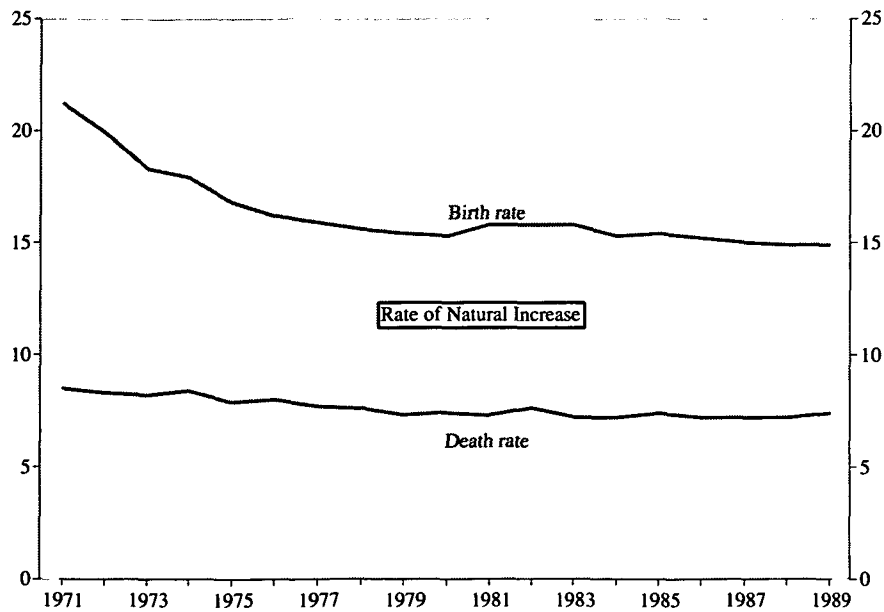
The decline in death rates is a result of continuing improvements to community health care, public awareness of health issues and advances in medical science and technology.

In Australia, as in most other countries, females have lower death rates than males. Age-specific rates show this discrepancy occurring across all age groups. In 1989, for example, the female death rate in many age groups was about half that of males. The relative difference between death rates for males and females was greatest in the age range 15 to 24 years where in 1989 the female rate was about one-third that of males.

BIRTHS AND DEATHS, AUSTRALIA



RATES OF BIRTHS AND DEATHS(a), AUSTRALIA



(a) Per thousand mean population.

The overall effect of these differences in death rates has been to increase the proportion of females in the older age groups of the population.

Concurrent with the decline in death rates over the last two decades there has been a rise in life expectancy at birth, increasing for males from 67.9 years to 73.3 years between the periods 1970–1972 and 1989, and correspondingly for females from 74.6 years to 79.6 years. Female life expectancy at birth has exceeded that of males throughout the period, with the difference varying from 6 to 7 years. Contributing to the increase in life expectancy at birth is the reduction in infant mortality rates, falling from 19.5 per thousand and 15.0 per thousand for males and females respectively in 1970–72 to 8.8 and 7.1 respectively in 1989.

AGE-SPECIFIC DEATH RATES(a) BY SEX, AUSTRALIA

	Age group (years)																		
Period	*0*	*1–4*	*5–9*	*10–14*	*15–19*	*20–24*	*25–29*	*30–34*	*35–39*	*40–44*	*45–49*	*50–54*	*55–59*	*60–64*	*65–69*	*70–74*	*75–79*	*80–84*	*85 and over*
MALES																			
Average annual rates—																			
1971–75	18.4	0.9	0.4	0.4	1.5	1.7	1.3	1.4	2.1	3.4	6.0	9.6	15.9	25.5	39.3	61.2	95.3	141.2	231.7
1976–80	13.6	0.7	0.3	0.4	1.4	1.7	1.4	1.3	1.9	3.0	5.2	8.6	13.8	22.2	35.3	54.2	87.7	127.9	210.7
1981–85*(b)*	11.0	0.6	0.3	0.3	1.2	1.5	1.3	1.3	1.5	2.4	4.1	7.2	12.2	19.2	31.1	49.4	78.0	119.1	205.6
Annual rates—																			
1981	11.4	0.6	0.3	0.3	1.3	1.5	1.3	1.2	1.7	2.6	4.6	7.9	13.0	19.8	32.3	52.0	80.2	121.2	208.1
1982	11.8	0.7	0.4	0.4	1.3	1.6	1.4	1.3	1.6	2.5	4.5	7.5	12.7	20.0	33.0	51.9	82.7	124.4	216.0
1983	10.5	0.6	0.3	0.3	1.1	1.5	1.4	1.2	1.4	2.3	3.9	7.3	12.2	18.9	30.7	47.8	76.9	115.8	201.4
1984*(b)*	10.4	0.6	0.2	0.3	1.0	1.5	1.1	1.3	1.4	2.4	3.7	6.7	11.7	18.7	29.8	48.2	75.3	114.1	195.8
1985*(b)*	11.3	0.6	0.3	0.3	1.1	1.6	1.3	1.3	1.4	2.2	3.7	6.6	11.4	18.5	29.5	47.1	74.7	119.4	205.1
1986	10.0	0.5	0.3	0.3	1.1	1.5	1.3	1.3	1.4	2.3	3.5	6.3	10.7	18.0	28.3	45.4	72.1	110.7	187.2
1987	10.0	0.5	0.2	0.3	1.0	1.5	1.3	1.3	1.5	2.0	3.5	6.1	10.9	17.2	27.9	45.3	71.2	111.2	190.9
1988	9.8	0.5	0.2	0.3	1.1	1.6	1.5	1.4	1.5	2.2	3.4	6.0	10.0	17.3	27.2	45.0	71.9	110.7	186.6
1989	8.9	0.4	0.2	0.3	1.0	1.4	1.5	1.4	1.7	1.9	3.2	5.8	9.9	16.7	27.2	45.3	71.7	113.8	196.8
FEMALES																			
Average annual rates—																			
1971–75	14.0	0.7	0.3	0.2	0.6	0.5	0.6	0.8	1.3	2.1	3.5	5.2	8.0	12.2	19.4	33.1	57.3	97.4	187.9
1976–80	10.7	0.5	0.2	0.2	0.5	0.5	0.5	0.7	1.0	1.8	2.8	4.5	6.8	10.8	16.9	27.9	48.4	84.0	168.4
1981–85*(b)*	8.9	0.5	0.2	0.2	0.4	0.5	0.5	0.6	0.9	1.4	2.4	3.9	6.0	9.6	15.3	25.3	43.3	76.4	160.5
Annual rates—																			
1981	8.9	0.5	0.2	0.2	0.5	0.5	0.5	0.6	0.9	1.4	2.7	3.8	6.2	9.7	15.7	25.5	44.3	76.0	160.4
1982	9.1	0.5	0.2	0.2	0.4	0.5	0.5	0.5	0.8	1.5	2.5	4.2	6.2	10.1	16.0	25.7	45.1	79.3	170.4
1983	8.7	0.5	0.2	0.2	0.4	0.5	0.5	0.6	0.9	1.3	2.3	4.0	6.1	9.7	15.2	25.2	42.5	73.6	154.2
1984*(b)*	7.8	0.4	0.2	0.2	0.4	0.5	0.5	0.6	0.9	1.4	2.2	3.8	5.7	9.4	15.3	25.0	41.5	76.6	157.0
1985*(b)*	8.9	0.4	0.2	0.2	0.4	0.5	0.5	0.6	0.8	1.3	2.3	3.8	5.9	9.0	14.6	25.5	42.9	76.4	157.9
1986	7.7	0.4	0.2	0.2	0.4	0.5	0.5	0.6	0.8	1.4	2.2	3.5	5.7	8.8	15.1	24.8	41.1	71.2	148.3
1987	7.5	0.3	0.2	0.1	0.4	0.5	0.5	0.5	0.8	1.3	2.1	3.5	5.5	8.6	13.9	23.9	40.8	72.1	151.3
1988	7.6	0.4	0.2	0.2	0.4	0.5	0.5	0.6	0.8	1.2	2.1	3.4	5.5	8.7	13.8	23.5	40.7	71.4	147.7
1989	7.1	0.4	0.2	0.2	0.4	0.5	0.5	0.6	0.8	1.3	2.0	3.3	5.3	8.7	13.7	24.3	40.1	72.8	156.9

(a) Deaths per 1,000 mid-year population. *(b)* Adjusted for late registrations in New South Wales.

Changes in levels of mortality and age-specific death rates reflect trends in the incidence of specific causes of death. The three most prevalent causes of death at the present time are ischaemic heart disease, cancer and cerebrovascular disease or stroke which in 1989 collectively accounted for 66.5 per cent of deaths registered. The incidence of deaths from cerebrovascular disease is the lowest of the three and the only one currently declining. Amongst males it is now exceeded by deaths from respiratory causes, which are becoming more prevalent for both sexes.

Cause of death is age- and sex-related, with different causes assuming greater or lesser significance for males and females of different age groups. The most common causes of death during the first year of life are the culmination of conditions originating in the perinatal period. These include prematurity, birth injury and respiratory conditions present from birth.

LIFE EXPECTANCY AT VARIOUS AGES, AUSTRALIA
(years)

	At age—									
	0		*1*		*25*		*45*		*65*	
Period	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*
1970–72*(a)*	67.9	74.6	68.3	74.7	45.8	51.5	27.1	32.6	12.2	15.9
1975–77*(a)*	69.6	75.6	69.6	76.5	46.9	53.1	28.3	34.0	13.1	17.1
1980–82*(a)*	71.2	78.3	71.1	78.0	48.2	54.5	29.5	35.3	13.8	18.0
1981*(b)*	71.4	78.4	71.2	78.1	48.3	54.7	29.6	35.4	13.9	18.1
1982*(b)*	71.2	78.2	71.1	77.9	48.2	54.5	29.5	35.2	13.9	17.9
1983*(b)*	72.1	78.7	71.9	78.4	48.9	54.9	30.1	35.6	14.2	18.3
1984*(b)(c)*	72.6	79.1	72.4	78.7	49.3	55.2	30.5	35.9	14.5	18.5
1985*(b)(c)*	72.3	78.8	72.1	78.5	49.2	55.0	30.4	35.7	14.3	18.2
1986*(b)*	72.9	79.2	72.6	78.8	49.6	55.3	30.9	36.0	14.7	18.5
1987*(b)*	73.0	79.5	72.8	79.1	49.7	55.5	31.0	36.2	14.7	18.6
1988*(b)*	73.1	79.5	72.8	79.1	49.8	55.6	31.1	36.3	14.8	18.7
1989*(b)*	73.3	79.6	73.0	79.1	50.0	55.6	31.2	36.3	14.7	18.7

(a) Source: Australian Government Actuary. *(b) Source:* Australian Bureau of Statistics. *(c)* Adjusted for late registrations in New South Wales.

STANDARDISED DEATH RATES(a), CAUSES OF DEATH BY SEX, AUSTRALIA

Cause of death	*1971*	*1976*	*1981*	*1986*	*1988*	*1989*
	MALES					
Neoplasms	198	205	215	214	217	216
Endocrine, nutritional and metabolic diseases	20	17	16	17	18	19
Cardiovascular diseases	458	419	349	292	272	272
Cerebrovascular diseases	143	123	98	73	69	67
Other circulatory diseases	62	53	40	31	29	29
Respiratory diseases	106	109	83	73	76	84
Diseases of the digestive system	29	32	32	28	28	29
Diseases of infancy	25	20	14	12	12	11
External causes*(b)*—Accidents	80	70	58	48	49	46
—Violence, suicide	21	19	20	21	23	22
Other	58	53	49	52	57	57
Total	**1,200**	**1,120**	**974**	**861**	**851**	**852**
	FEMALES					
Neoplasms	125	125	122	130	129	128
Endocrine, nutritional and metabolic diseases	19	16	13	13	13	13
Cardiovascular diseases	246	212	175	159	148	150
Cerebrovascular diseases	136	113	86	66	61	59
Other circulatory diseases	46	37	27	20	19	19
Respiratory diseases	37	40	28	27	31	36
Diseases of the digestive system	17	18	17	17	17	16
Diseases of infancy	21	17	11	10	10	9
External causes*(b)*—Accidents	32	28	22	20	20	19
—Violence, suicide	11	7	7	7	7	6
Other	45	37	35	38	39	42
Total	**735**	**650**	**543**	**507**	**494**	**498**

(a) Per 100,000 persons, standardised to age distribution for persons, 1981. *(b)* Includes poisoning.

In 1989, external causes (accidents, violence and suicide) were the leading causes of death for each age group in the range 1–39 years, and particularly at ages 15 to 24 years where they accounted for 75.1 per cent of all deaths.

When male and female deaths were compared for particular age groups there were marked differences for certain main causes of death. For example, the male death rates for heart disease and external causes were over three times the equivalent rates for females aged 35 to 59 and 25 to 54 respectively.

The main cause of death for people in the 40–69 year age range was malignant neoplasms, accounting for 38.1 per cent of deaths. Deaths due to malignant neoplasms as a proportion of all deaths have risen slightly over the period 1980 to 1989. However, there has been little change in the distribution of cancer deaths by the primary site of growth. Malignant neoplasms of the digestive organs and peritoneum accounted for approximately 30 per cent of both male and female cancer deaths. The pattern of cancer deaths across other sites varied between the sexes. Whereas for 29.3 per cent of male deaths due to malignant neoplasms the primary site of growth was located in the respiratory and intrathoracic organs, this site accounted for only 12.6 per cent of female cancer deaths. However, malignant neoplasms of the breast accounted for 2,431 female deaths in 1989, representing 18.8 per cent of all female cancer deaths.

For people aged 70 and over the main cause of death was heart disease. In 1989, 31.9 per cent of all deaths registered in Australia were attributed to heart disease. While this proportion was similar for males and females overall, the distribution of deaths by age group differed between the sexes. Heart disease was a more significant cause of death at younger ages for males than for females (*see above*).

Marriages

The number of marriages occurring in Australia reached a peak of 117,600 in 1971 which, despite a growing population, has not yet been surpassed. The 1971 peak was followed by a rapid decline in numbers which coincided with growing public acceptance of de facto relationships. Although this decline levelled off in the latter half of the 1970s and numbers have recovered in the 1980s (there were 117,176 marriages in 1989) the crude marriage rate has continued to drop. In 1989 it was 7.0 per thousand mean population.

The passing of the Family Law Act in 1976 (which provided easy and faster access to divorce) had a significant effect on the composition of marriages. Prior to the Act approximately 80–85 per cent of marriages were first marriages for both partners, but after 1976 this proportion fell to 65–70 per cent. In 1989 the figure was 67.3 per cent.

MARRIAGES REGISTERED: RELATIVE PREVIOUS MARITAL STATUS, NUMBER AND PER CENT, AND CRUDE MARRIAGE RATE, AUSTRALIA

	Both partners never married		*One or both partners previously married*			
Period	*Number*	*Per cent*	*Number*	*Per cent*	*All marriages*	*Crude marriage rate*
Annual averages—						
1971–1975	93,734	83.8	18,068	16.2	111,802	8.3
1976–1980	73,401	69.1	32,896	30.9	106,297	7.4
1981–1985	77,003	67.5	37,035	32.5	114,038	7.4
1986	76,647	66.7	38,266	33.3	114,913	7.2
1987	76,706	67.2	37,407	32.8	114,113	7.0
1988	78,400	67.1	38,416	32.9	116,816	7.1
1989	78,850	67.3	38,326	32.7	117,176	7.0

MEDIAN AGES OF BRIDEGROOMS AND BRIDES, PREVIOUS MARITAL STATUS, AUSTRALIA

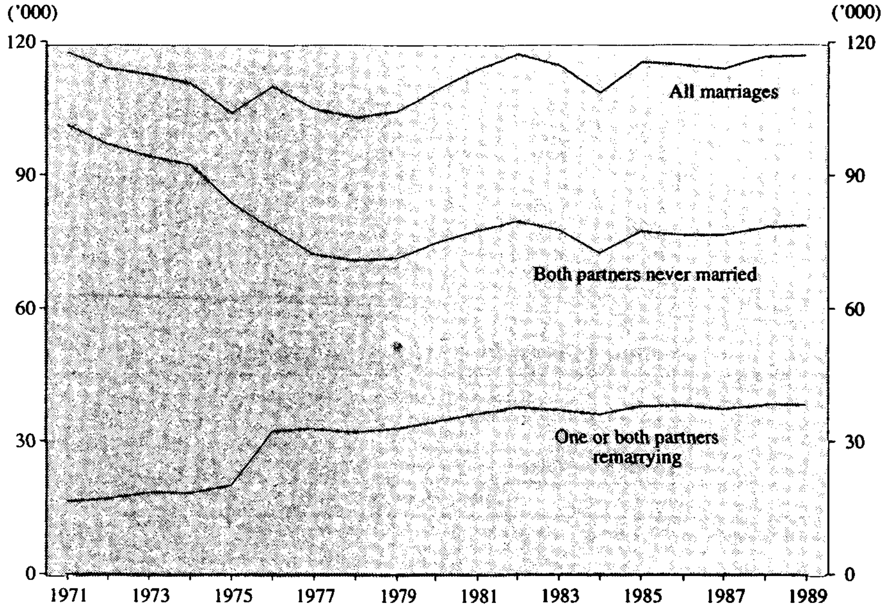
	Median age of bridegrooms				*Median age of brides*			
Period	*Bachelors*	*Widowers*	*Divorced*	*Total*	*Spinsters*	*Widows*	*Divorced*	*Total*
Annual averages—								
1971–75	23.3	57.8	37.3	23.9	21.0	51.1	33.0	21.4
1976–80	23.9	58.4	36.1	25.4	21.6	51.6	32.5	22.7
1981–85	24.9	59.8	36.6	26.4	22.7	52.2	33.5	23.9
1986	25.6	60.5	38.3	27.3	23.5	52.6	34.8	24.9
1987	25.9	60.6	38.6	27.6	23.8	52.4	35.1	25.2
1988	26.1	60.9	38.9	27.8	24.0	52.4	35.3	25.4
1989	26.3	61.0	39.3	28.0	24.2	52.5	35.6	25.7

FIRST MARRIAGE RATIOS(a), AUSTRALIA

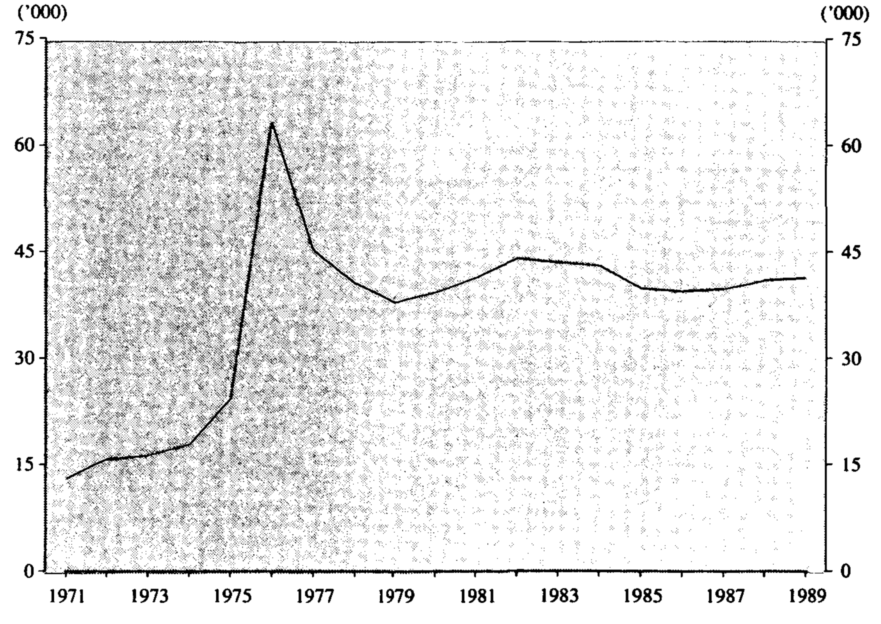
	Cumulative ratios of age-groups(b)—						*Index of total first marriages (c)*
Period	*To 19*	*20–24*	*25–29*	*30–34*	*35–39*	*40 and over*	
BRIDEGROOMS							
Average annual ratios—							
1971–75	72.0	506.4	201.4	58.7	22.9	30.9	892.2
1976–80	37.6	368.2	184.4	55.2	20.8	28.5	694.7
1981–85*(d)*	16.9	310.1	221.1	71.2	23.3	24.6	667.3
Annual ratios—							
1981	26.7	346.7	209.4	62.7	22.7	27.5	695.7
1982	24.1	337.0	220.3	68.2	22.9	27.3	699.8
1983	19.1	312.6	223.4	71.0	22.9	24.6	673.7
1984*(d)*	15.6	277.3	218.4	70.9	22.7	23.9	628.7
1985*(d)*	14.1	280.3	236.9	81.2	25.2	25.0	662.9
1986*(d)*	9.8	263.0	237.1	85.0	26.6	23.6	645.0
1987	9.0	247.2	241.5	90.4	27.4	24.3	639.8
1988	9.8	239.9	248.3	96.3	30.8	23.1	648.1
1989	8.4	233.3	248.8	100.0	32.0	24.9	647.2
BRIDES							
Average annual ratios—							
1971–75	299.1	452.2	92.7	27.5	10.9	15.8	898.2
1976–80	182.9	362.7	95.5	28.0	11.4	14.7	695.0
1981–85*(d)*	111.9	377.0	135.0	36.1	11.8	11.2	682.8
Annual ratios—							
1981	142.9	384.6	116.1	30.7	11.2	12.7	698.2
1982	130.7	389.2	129.8	34.3	11.4	12.2	707.9
1983	110.4	382.8	136.9	36.4	11.5	11.4	689.3
1984*(d)*	93.2	355.5	137.4	36.6	11.3	11.1	645.0
1985*(d)*	88.7	372.5	156.1	42.5	13.4	12.0	685.0
1986*(d)*	76.3	360.7	165.8	46.5	14.0	11.2	674.6
1987	67.3	350.0	173.5	50.8	15.8	11.5	668.9
1988	63.1	346.9	184.5	55.2	16.3	11.2	677.2
1989	56.5	336.8	190.6	59.9	18.3	12.1	674.2

(a) Per 1,000 mid-year population of males and females of each age. *(b)* Ratios for each age-group are calculated by summing the ratios for single years. *(c)* The sum of all single year ratios. *(d)* These ratios have been affected by late registrations of births, deaths and marriages in New South Wales.

MARRIAGES, AUSTRALIA



DIVORCES (a), AUSTRALIA



(a) The sharp increase in divorces between 1975 and 1976 is due to the introduction of the Family Law Act in 1976.

Since 1971 there has been a reversal in the post-war trend towards younger marriages. The median age at first marriage for both males and females is now rising, having increased from 23.3 years in 1971 to 26.3 years in 1989 for males and from 21.0 to 24.2 years for females. The median age for second and subsequent marriages is also rising. There is also a trend towards a narrower gap between the age of the bride and groom at the time of first marriage, having fallen from 2.3 years in 1971 to 2.1 years in 1989.

The increasing median age at first marriage is reflected in first marriage ratios which show declines for both brides and grooms under the age of 25 and increases in the age range 25–39. The discrepancy between ages at first marriage of brides and grooms is also reflected in the lower ratios for grooms under the age of 25. The Index of total first marriages, which is the cumulative total of first marriage ratios at each age, has been declining throughout the last two decades. It shows that the falling crude marriage rate cannot be attributed to changes in the age structure of the population, i.e. that there has been a real reduction in the propensity to marry in the Australian community.

The decline in first marriage ratios under the age of 25 and the increase in the median age at first marriage over the last decade may reflect to some extent the tendency of some couples to live together before getting married. It seems reasonable to postulate that amongst de facto couples a certain proportion will eventually marry, even though at a later age, whereas others will prefer to remain unmarried. Analysis of current trends in marriage is qualified by the absence of any time series data on the formation of de facto relationships. However there is evidence (from the Family Formation Surveys in 1982 and 1986, the 1986 Census and, indirectly, Censuses in 1971, 1976 and 1981) that the number of de facto relationships is growing. At 30 June 1986 there were 204,900 de facto 'couple families' compared with 3,370,100 married couple families.

Divorces

DIVORCES, AUSTRALIA

Period	*Divorces*	*Years*	*Divorces*
Annual averages—		Annual totals—	
1971–75	17,348	1978	40,608
1976–80	45,220	1979	37,854
1981–85	42,396	1980	39,258
Annual totals—		1981	41,412
1971	13,002	1982	44,088
1972	15,707	1983	43,525
1973	16,266	1984	43,124
1974	17,744	1985	39,830
1975	24,307	1986	39,417
1976	63,230	1987	39,725
1977	45,150	1988	41,007
		1989	41,383

Divorce in Australia comes under the jurisdiction of the *Family Law Act 1975*. This Act, which came into operation on 5 January 1976, provides for a single ground for divorce, namely irretrievable breakdown of marriage, which is established by a minimum one-year separation of the husband and wife. Passing of the Act provided easier and faster access to divorce for either party by its removal of the need to prove fault, together with a reduction of the separation period from five years to one year. After the introduction of the Family Law Act, the number of divorces rose from annual averages of 17,350 to 45,220 between 1971–75 and 1976–80 respectively, while the median duration of marriage of divorcing couples decreased from 12.5 years in 1971 to 10.2 years in 1981, increased slightly to 10.6 in the years to 1986 and then declined again to 10.2 years in 1989.

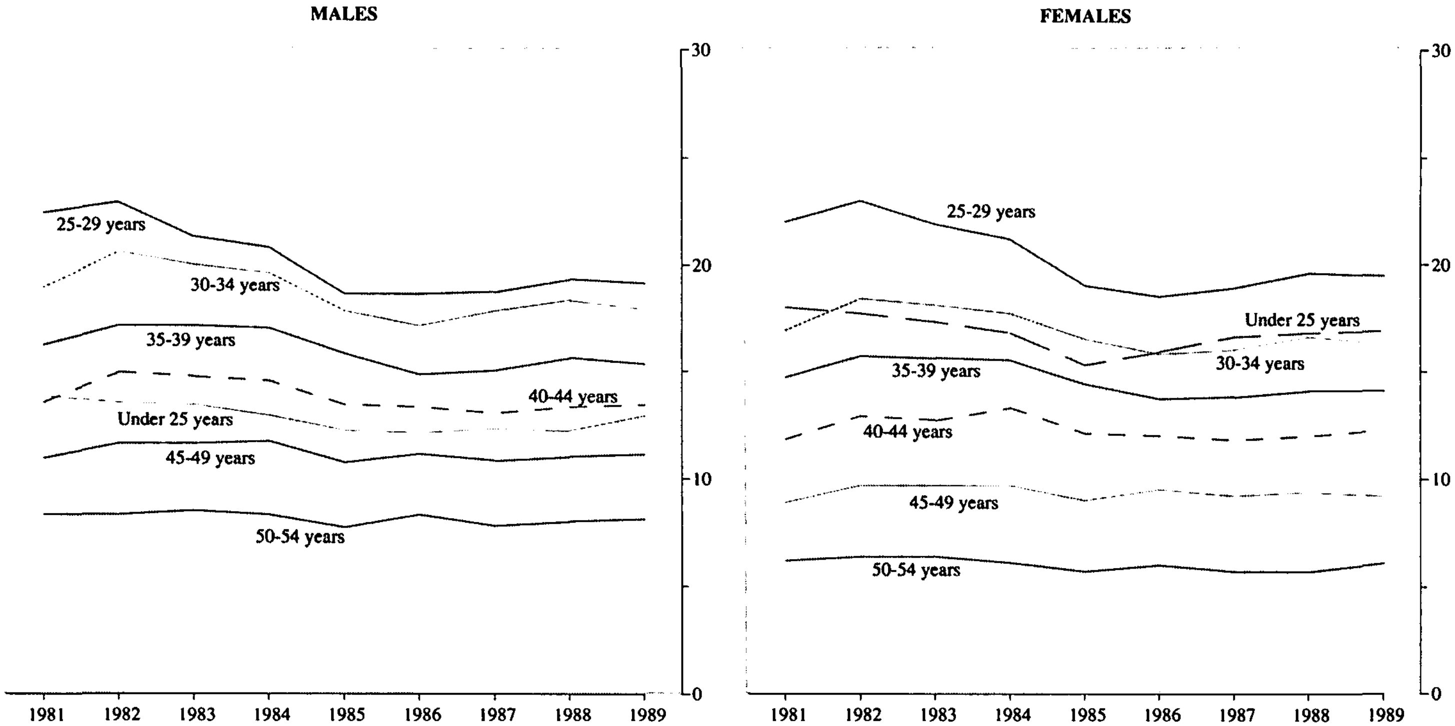
There is currently a tendency for divorce to occur in the early years of marriage and at an early age. The proportion of divorces taking place within the first five years of marriage was 20.9 per cent in 1989 and within the first ten years it was 49.2 per cent. The highest divorce rates for both males and females occurred in the 25–29 year age group, with 19.1 per thousand married men and 19.5 per thousand married women completing divorce proceedings. The overall incidence of divorce in 1988 and 1989 was constant at 10.8 per thousand married population. After a period between 1982 and 1987 in which a significant decline occurred (from 12.5 to 10.6 per thousand married population) the rate seems to be achieving some stability.

DIVORCES: DURATION OF MARRIAGE, AUSTRALIA

	Duration of marriage (years)						
Year	*Under 5*	*5–9*	*10–14*	*15–19*	*20 and over*	*Total*	*Median duration of marriage*
			AT DATE DECREE MADE ABSOLUTE				
			—per cent—				years
1976	15.5	30.2	18.1	12.5	23.7	100.0	11.0
1981	20.8	28.5	19.6	11.9	19.2	100.0	10.2
1982	20.3	28.0	20.0	13.0	18.8	100.0	10.4
1983	20.3	26.9	20.5	13.3	19.0	100.0	10.6
1984	20.8	26.6	19.6	13.8	19.1	100.0	10.6
1985	21.2	26.4	18.7	14.1	19.5	100.0	10.6
1986	21.7	26.2	17.8	14.3	20.0	100.0	10.6
1987	22.1	26.9	17.3	14.4	19.3	100.0	10.2
1988	21.4	28.1	17.3	14.2	19.1	100.0	10.1
1989	20.9	28.3	17.1	13.9	19.8	100.0	10.2
			AT DATE OF FINAL SEPARATION				
			—per cent—				years
1976	39.6	22.5	13.6	10.6	13.8	100.0	6.9
1981	36.4	24.9	15.9	10.2	12.6	100.0	7.5
1982	36.2	24.3	16.3	10.9	12.3	100.0	7.6
1983	35.9	23.4	17.1	11.0	12.5	100.0	7.8
1984	36.4	22.8	16.9	11.1	12.6	100.0	7.8
1985	36.6	22.3	16.7	11.6	12.9	100.0	7.7
1986	37.6	21.5	16.0	11.7	13.2	100.0	7.6
1987	38.3	21.7	15.4	11.8	12.8	100.0	7.3
1988	38.5	22.1	15.1	11.8	12.6	100.0	7.3
1989	37.9	22.3	14.9	12.0	12.7	100.0	7.3

The current declining median duration between marriage and final separation combined with increasing average interval between marriage and first birth (*see* Births section above) is having the beneficial effect of reducing the proportion of divorcing couples with children. The proportion of divorces in which children were involved declined from 61.6 per cent in 1983 to 55.3 per cent in 1989. The average number of children per divorce has remained steady at 1.9.

AGE SPECIFIC DIVORCE RATES(a), SELECTED AGE GROUPS, AUSTRALIA



(a) Divorces per 1000 married population

AGE-SPECIFIC DIVORCE RATES PER 1,000 MARRIED POPULATION, AUSTRALIA

Year	Age group (years) Under 25	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60 and over	Total
HUSBAND										
1976	18.0	31.6	28.8	23.9	21.2	18.6	15.0	11.1	5.1	18.9
1981	13.8	22.4	18.9	16.2	13.5	10.9	8.3	5.2	2.3	11.9
1982	13.5	22.9	20.6	17.1	14.9	11.6	8.3	5.8	2.3	12.5
1983	13.4	21.3	20.0	17.1	14.7	11.6	8.5	5.7	2.4	12.2
1984	12.9	20.8	19.6	17.0	14.5	11.7	8.3	6.0	2.4	12.0
1985	12.2	18.6	17.8	15.8	13.4	10.7	7.7	5.6	2.1	10.9
1986	12.1	18.6	17.1	14.8	13.3	11.1	8.3	5.4	2.1	10.7
1987	12.3	18.7	17.8	15.0	13.0	10.8	7.8	5.1	2.1	10.6
1988	12.2	19.3	18.3	15.6	13.3	11.0	8.0	5.2	2.0	10.8
1989	12.9	19.1	17.9	15.3	13.4	11.1	8.1	5.5	2.1	10.8
WIFE										
1976	22.7	31.5	26.9	22.0	19.2	16.0	12.6	8.8	4.1	18.8
1981	18.0	22.0	16.9	14.7	11.8	8.9	6.2	4.1	1.8	11.9
1982	17.7	23.0	18.4	15.7	12.9	9.7	6.4	4.0	1.8	12.5
1983	17.3	21.9	18.1	15.6	12.7	9.7	6.4	4.1	1.8	12.2
1984	16.8	21.2	17.7	15.5	13.3	9.7	6.1	4.0	1.8	11.9
1985	15.3	19.0	16.5	14.4	12.1	9.0	5.7	3.8	1.6	10.9
1986	15.9	18.5	15.8	13.7	12.0	9.5	6.0	3.7	1.5	10.6
1987	16.6	18.9	16.0	13.8	11.8	9.2	5.7	3.5	1.5	10.6
1988	16.8	19.6	16.6	14.1	12.0	9.4	5.7	3.6	1.4	10.8
1989	16.9	19.5	16.3	14.1	12.3	9.2	6.1	3.6	1.4	10.8

DIVORCES: PERCENTAGE DISTRIBUTION OF THE NUMBER OF CHILDREN OF THE MARRIAGE, AUSTRALIA

Period	Number of children 0	1	2	3	4	5 or more	Total divorces	Total children	Average number of children(a)
			—per cent—				No.	No.	No.
1976–80	37.6	22.5	24.3	10.5	3.6	1.5	226,100	276,088	2.0
1981–85	38.8	21.5	26.1	10.1	2.7	0.8	211,979	252,198	1.9
1981	38.9	21.5	25.6	10.0	3.0	1.0	41,412	49,616	2.0
1982	38.4	21.6	26.2	10.3	2.7	0.8	44,088	53,010	2.0
1983	38.4	21.8	26.2	10.2	2.7	0.7	43,525	52,059	1.9
1984	39.1	21.6	26.2	9.8	2.6	0.7	43,124	50,713	1.9
1985	39.4	21.1	26.2	10.0	2.6	0.7	39,830	46,800	1.9
1986	40.3	21.2	25.8	9.5	2.5	0.7	39,417	45,231	1.9
1987	41.4	21.7	25.1	9.0	2.2	0.6	39,723	44,050	1.9
1988	42.5	21.5	24.7	8.7	2.2	0.5	41,007	44,395	1.9
1989	44.7	20.4	23.7	8.7	2.1	0.5	41,383	43,317	1.9

(a) Divorces involving one or more children.

Remarriages

During the 1980s the number of remarriages (i.e. marriages involving one or more previously married parties) remained steady but on a higher plateau than in the 1970s. The 1989 total of 38,326 remarriages, which represented 32.7 per cent of all marriages, was typical of the current level. The average number of remarriages in the second half of the 1970s, 1976-80, was 32,900 or 30.9 per cent of all marriages. This was also a period in which numbers remained remarkably steady.

The reason for the sudden rise in remarriages at the beginning of the 1980s was brought about entirely by growth in the numbers of marriages in which one or both parties were divorced at the time of marriage and was an after-effect of the *Family Law Act 1976* (*see* Divorces section above).

Set against rising population numbers, the current plateau in remarriages is resulting in declining remarriage rates. The remarriage rate for males was 64.2 per thousand widowed and divorced male population in 1988, down from 84.2 in 1981. The female rate has fallen from 30.5 in 1981 to 26.1 in 1988. Again (*see* above) the absence of data on de facto unions of people previously married qualifies analysis of current trends. The discrepancy between male and female remarriage rates is caused by longer female survival and therefore greater numbers of females being available for remarriage at older ages.

MARRIAGES IN WHICH ONE OR BOTH PARTNERS HAVE BEEN PREVIOUSLY MARRIED: RELATIVE PREVIOUS MARITAL STATUS, NUMBER AND PER CENT, AUSTRALIA

	Both partners divorced		*One partner divorced*		*One or both partners widowed(a)*		
Period	*No.*	*%*	*No.*	*%*	*No.*	*%*	*Total No.*
Annual averages—							
1976–80	9,961	30.3	19,924	60.6	3,011	9.2	32,896
1981–85*(b)*	12,125	32.7	22,399	60.5	2,511	6.8	37,035
Annual totals—							
1976	8,767	27.3	20,031	62.3	3,359	10.4	32,157
1981	11,656	32.1	21,851	60.3	2,758	7.6	36,265
1982	12,208	32.4	22,865	60.8	2,569	6.8	37,642
1983	12,108	32.7	22,491	60.6	2,499	6.7	37,098
1984*(b)*	11,956	33.1	21,814	60.4	2,345	6.5	36,115
1985*(b)*	12,698	33.3	22,973	60.4	2,383	6.3	38,054
1986*(b)*	12,870	33.5	22,868	59.9	2,528	6.5	38,266
1987	12,438	33.2	22,594	60.4	2,396	6.4	37,428
1988	12,709	33.1	23,359	60.8	2,348	6.1	38,416
1989	12,471	32.5	23,496	61.3	2,359	6.2	38,326

(a) Includes 'not stated' previous marital status. *(b)* The statistics for 1984, 1985 and 1986 were affected by late registrations in New South Wales.

REMARRIAGES, DIVORCED AND WIDOWED PERSONS AGED 15 AND OVER, AUSTRALIA

Year	Total marriages	Remarriages of persons previously— Widowed	Divorced	Total	Remarriage rates Widowed(a)	Divorced(b)	Total(c)
			MALES				
1976	109,973	3,777	19,404	23,181	29.6	201.2	103.5
1981	113,905	3,152	23,293	26,445	23.1	131.1	84.2
1982	117,275	2,988	24,429	27,417	21.3	119.5	79.6
1983	114,860	2,959	24,333	27,292	21.0	110.5	75.5
1984	108,655	2,798	23,708	26,506	19.7	100.3	70.0
1985	115,493	2,843	25,129	27,972	19.8	100.7	71.2
1986	114,913	2,952	25,285	28,237	20.9	101.8	72.5
1987	114,113	2,920	24,602	27,522	19.9	89.3	65.2
1988	116,816	2,845	25,281	28,126	19.1	87.5	64.2
1989	117,176	2,855	25,124	27,979	18.9	83.4	61.8
			FEMALES				
					(d)	(e)	(f)
1976	109,973	4,378	18,161	22,539	7.9	146.3	33.3
1981	113,905	3,727	21,870	25,597	6.1	96.9	30.5
1982	117,275	3,579	22,852	26,431	5.7	90.5	30.0
1983	114,860	3,457	22,374	25,831	5.4	82.5	28.5
1984	108,655	3,312	22,018	25,330	5.2	75.8	27.1
1985	115,493	3,414	23,240	26,654	5.3	75.7	27.9
1986	114,913	3,564	23,279	26,843	5.6	74.8	28.2
1987	114,113	3,393	22,783	26,176	5.1	67.1	26.1
1988	116,816	3,324	23,496	26,820	5.0	65.8	26.1
1989	117,176	3,357	23,313	26,670	4.9	62.5	25.4

(a) Per thousand widowed males. *(b)* Per thousand divorced males. *(c)* Per thousand widowed and divorced males. *(d)* Per thousand widowed females. *(e)* Per thousand divorced females. *(f)* Per thousand widowed and divorced females.

MIGRATION

Statistics of overseas arrivals and departures are compiled from passenger cards which are collected from all incoming and outgoing travellers under the *Migration Act 1958*. Earlier statistics were obtained from Shipping and Plane manifests required under various Acts.

Since 1924, overseas travellers have been classified into two principal categories which distinguish short-term movements (of less than 12 months duration) from long-term movements (of 12 months duration or longer, including permanent movements). Revised questions for travellers were introduced in 1959 and again in 1974. The 1959 revision enabled the distinction of permanent from other long-term movements and also the identification of former settlers departing permanently. The 1974 revisions improved the layout of the passenger card without changing the classification.

Migration to Australia

Migration to Australia is presently regulated by the *Migration Act 1958* which came into force on 1 June 1959. Any person entering Australia after the introduction of the Act without having been granted an entry permit or who is not within an exempted class is a prohibited non-citizen. Exempted persons include New Zealand citizens, diplomatic and consular representatives of other countries, and seamen and air crew who enter Australian ports while on leave.

Until recently, total net gains (i.e. the excess of total arrivals over total departures) provided a satisfactory measure of the population gain from international migration. In recent years, however, because of the large increase in short term movements (8 million in 1989), distortions arising from seasonality of these movements 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. Net permanent and long-term migration is estimated to have directly contributed 40.0 per cent of the total population increase between 1971 and 1989.

Throughout the last two decades, British migrants have remained the most numerous group of settlers, although they have declined in absolute numbers and as a proportion of total settler arrivals. In the first half of the 1970s they comprised 41.2 per cent of settler arrivals but in the four years 1986 to 1989 this proportion had fallen to 19.5 per cent. At the same time the number of settlers from other European sources, such as Italy, Greece, Yugoslavia, Germany and the Netherlands, have also declined. Indirectly, though, the fall in British and European immigration has been somewhat offset by substantial increases in settlers arriving from New Zealand, although these have declined over the last year.

BIRTHPLACE OF SETTLER ARRIVALS(a), AUSTRALIA, SELECTED CALENDAR YEARS

Birthplace	*1971–75*	*1976–80*	*1981–85*	*1986–89*	*1971–75*	*1976–80*	*1981–85*	*1986–89*
			—'000—			—per cent—		
United Kingdom and Ireland	226.0	94.8	115.9	100.2	41.2	25.7	25.2	19.5
New Zealand	17.5	46.5	48.6	71.7	3.2	12.6	10.6	13.9
Italy	18.4	6.6	4.3	2.0	3.4	1.8	0.9	0.4
Yugoslavia	40.3	7.9	7.3	10.9	7.3	2.2	1.6	2.1
Greece	21.1	5.6	3.9	3.1	3.8	1.5	0.8	0.6
Vietnam	*(b)*	36.4	47.2	29.4	*(b)*	9.8	10.3	5.7
Germany	10.3	5.1	11.6	5.3	1.9	1.4	2.5	1.0
United States of America	19.5	6.1	8.4	7.6	3.6	1.7	1.8	1.5
Lebanon	12.8	18.1	7.0	12.5	2.3	4.9	1.5	2.4
Netherlands	5.6	4.7	6.4	2.2	1.0	1.3	1.4	0.4
India	12.1	4.5	8.3	11.2	2.2	1.2	1.8	2.2
South Africa	6.3	11.2	12.2	14.7	1.1	3.0	2.7	2.9
Poland	2.2	3.6	14.8	6.8	0.4	1.0	3.2	1.3
Turkey	11.6	5.0	3.7	4.8	2.1	1.4	0.8	0.9
Philippines	3.1	8.4	15.4	31.2	0.6	2.3	3.4	6.1
Malaysia	4.8	8.7	10.4	22.5	0.9	2.4	2.3	4.4
Hong Kong	*(b)*	5.4	9.9	21.9	*(b)*	1.5	2.2	4.3
Kampuchea	*(b)*	2.4	10.3	4.8	*(b)*	0.7	2.2	0.9
Other	136.8	88.1	113.8	151.4	24.9	23.9	24.8	29.6
Total	**548.4**	**369.1**	**459.4**	**514.2**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Permanent arrivals only. *(b)* The statistics for this country are not separately available but are included in the category 'Other'.

Since the first large intakes of Vietnamese refugees in the late 1970s increasing numbers of settlers have been arriving from Asian countries. Growth is currently strongest in the numbers arriving from Vietnam, the Philippines, Malaysia and Hong Kong, which combined, have accounted for 20.4 per cent of the settler arrivals in the four years 1986 to 1989.

Since 1978–79, family immigration has increased in importance, with migration of family members now amounting to over 50 per cent of settler arrivals. Another recent trend has been the increase in non-visaed migrants to Australia. These are primarily New Zealand citizens migrating under the Trans-Tasman Travel Arrangement under which Australian and New Zealand citizens may enter each country without the need to obtain visas or entry permits. Other non-visaed migrants include children born to Australian citizens overseas, persons who have acquired Australian citizenship overseas and residents of Norfolk Island (an Australian Territory). New Zealand migrants increased numerically from 17,500 to 48,600 between 1971–75 and 1981–85 and as a proportion of total migrants from

3.2 per cent to 10.6 per cent between those periods. In 1989, New Zealanders comprised 13.2 per cent of total settler arrivals for the year.

The age composition of settlers has been younger than that of Australia's population for some time and reflects the predominance of young families arriving in Australia. Persons aged 65 years and over represented 3.6 per cent of migrants arriving between 1971 and 1985, which contrasts with the share of these people in Australia's population of 10.5 per cent in 1986. In 1989 3.3 per cent of settlers were aged 65 years and over, whereas the share in the total population has risen to 11.0 per cent.

PERMANENT ARRIVALS BY SEX AND AGE, PERCENTAGE DISTRIBUTION, AUSTRALIA

	Age group						
Period	*0–4*	*5–14*	*15–24*	*25–44*	*45–64*	*65 and over*	*Total number*
			MALES				
Annual averages—							
1971–75	13.3	17.9	23.1	36.4	7.0	2.2	55,790
1976–80	13.4	19.4	20.9	34.4	8.1	3.8	36,830
1981–85	12.2	19.1	19.0	38.4	7.8	3.6	46,760
1986	10.4	18.2	18.3	40.0	9.1	3.9	51,000
1987	11.2	18.0	16.6	41.8	8.7	3.7	63,798
1988	11.0	18.3	15.6	43.0	8.9	3.1	75,718
1989	10.7	18.1	16.7	42.0	9.5	3.1	64,490
			FEMALES				
Annual averages—							
1971–75	12.9	17.3	25.4	32.4	8.9	3.2	53,900
1976–80	12.5	17.3	21.9	32.9	10.5	4.9	37,000
1981–85	11.8	17.4	19.3	37.6	9.4	4.5	45,122
1986	10.0	15.8	19.2	40.4	10.3	4.3	52,326
1987	10.7	16.3	18.0	40.8	10.0	4.2	64,490
1988	10.6	17.1	17.4	41.8	9.5	3.5	75,831
1989	9.9	16.6	18.5	41.4	9.9	3.6	66,570
			PERSONS				
Annual averages—							
1971–75	13.1	17.6	24.2	34.4	7.9	2.7	109,690
1976–80	13.0	18.3	21.4	33.6	9.3	4.3	73,830
1981–85	12.0	18.3	19.2	38.0	8.6	4.0	91,882
1986	10.2	17.0	18.8	40.2	9.7	4.1	103,326
1987	11.0	17.2	17.3	41.3	9.4	4.0	128,288
1988	10.8	17.7	16.5	42.4	9.2	3.3	151,549
1989	10.3	17.3	17.6	41.7	9.7	3.3	131,060

Despite the youthfulness of the settlers, their median age has been rising. In 1971 it was 23.1 years and in 1989 it was 26.0 years. This rise has been particularly marked since 1981, when the numbers of migrants under the 'family reunion' category began to increase. At the younger ages, declines have taken place since the mid 1970s in the proportion of settlers in the 15–24 year age group while there has been an increase in the proportion of settlers in the 25–44 year age group.

The sex ratio of settlers tends to be high in years of large intake, and falls as intake declines. There was a rise in the sex ratio between 1984 and 1988 as settler arrivals increased, but in 1989 it fell back to 96.9 males per 100 females as the number of settlers declined. Throughout this period the ratio has remained below 100.0 and, since traditionally male settlers have predominated, has therefore been historically low. Males currently predominate in the 0–14 year age group only. There is a low and declining sex ratio for settlers aged 15–24 years. The ratio for settlers aged 45 years and over, though at the same level as the 15–24 year age group, is historically high for those ages.

PERMANENT ARRIVALS: SEX RATIOS(a) BY AGE, AUSTRALIA

	Age group					
Period	*0–14*	*15–24*	*25–44*	*45–64*	*65+*	*Total*
Annual averages—						
1971–75	109.6	94.1	116.5	81.2	72.3	103.5
1976–80	109.6	95.1	104.1	76.4	76.8	99.5
1981–85	111.3	101.7	105.7	85.1	83.2	103.6
1986	108.1	93.0	96.6	86.5	88.1	97.5
1987	106.8	91.5	101.4	86.4	85.6	98.9
1988	105.3	89.9	102.6	93.8	89.1	99.9
1989	105.1	87.2	98.1	93.1	84.4	96.9

(a) The number of males per 100 females.

Refugees

Since 1945, Australia has accepted more than 420,000 refugees or displaced persons, including 170,000 from Europe who were displaced by World War II and its aftermath. Australia presently accepts refugees from about 40 countries. The largest element in recent years in Australia's refugee intake has been the Indo-Chinese program which currently accounts for just over half the number of refugee arrivals.

REFUGEE ARRIVALS(a), AUSTRALIA

Period	*Number*
Annual averages—	
1971–75	10,549
1976–80	12,558
1981–85	17,072
Annual totals—	
1981	21,972
1982	17,522
1983	17,016
1984	15,761
1985	13,089
1986	10,196
1987	12,255
1988	10,303
1989	11,883

(a) Includes arrivals under the Special Humanitarian Program instituted late in 1981.

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 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 twofold. 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.

Permanent Departures

An important component constraining population growth is the level of population loss due to emigration. Between 1971 and 1989, total permanent departures numbered 505,525 persons or an average of 26,606 per year, a level which is 26.7 per cent of the total permanent arrivals over this period. The ratio of departures to arrivals has fallen from 26.4 per cent in 1971 to 18.9 per cent in 1989.

PERMANENT DEPARTURES BY CATEGORY AND PERMANENT ARRIVALS, AUSTRALIA

	Permanent departures				
Year	*Former settlers*	*Other residents*	*Total*	*Permanent arrivals*	*Ratio of permanent departures to permanent arrivals*
1971	29,449	11,673	41,122	155,525	0.264
1972	33,172	12,709	45,881	112,468	0.408
1973	30,325	13,105	43,430	105,003	0.414
1974	21,849	11,902	33,751	121,324	0.278
1975	18,315	10,769	29,084	54,117	0.537
1976	16,815	9,917	26,732	58,317	0.458
1977	14,171	8,591	22,762	75,640	0.301
1978	14,027	10,934	24,961	68,420	0.365
1979	12,670	10,750	23,420	72,420	0.323
1980	11,450	9,393	20,843	94,500	0.221
1981	11,280	8,576	19,856	118,740	0.167
1982	13,352	9,141	22,493	107,170	0.210
1983	16,920	8,950	25,870	78,400	0.330
1984	12,550	9,760	22,310	73,110	0.305
1985	10,020	8,600	18,620	82,000	0.227
1986	9,960	8,860	18,820	103,330	0.182
1987	11,010	9,400	20,410	128,290	0.159
1988	10,480	9,840	20,320	151,550	0.134
1989	11,940	12,890	24,830	131,060	0.189

Of the two categories of permanent departures, that is 'former settlers' and 'other residents', it has been under the first category that there has been the greatest outflow of persons. Between 1971 and 1989, 'former settlers' represented 61.3 per cent of all permanent departures. The departure of 'other residents' fluctuated between 9,000 and 13,000 persons from year to year throughout the period. The fall which has occurred in the total number of departures has been largely attributable to the decline in the number of 'former settlers' departing. Two policy initiatives have contributed to the decline. These are firstly the shift in emphasis to family reunion as a basis for acceptance and secondly the refugee settlement program. Both family members and refugees are less likely than other settlers to return to their own country.

Internal Migration

Information on internal migration (migration from one part of Australia to another) has been available from the population censuses since 1971. The census asks people to state their place of usual residence on Census night and also on the same date one year ago and five years ago. Comparison of these addresses has provided data on interstate migration and also (for the 1986 Census only) intrastate movement. Movers are classified by age, sex, birthplace and other selected characteristics. These census questions also provide data on where migrants, recently arrived from overseas, are now living.

Postcensal data on interstate migration are estimated, for quarterly intervals, from information on interstate changes of address advised to the Health Insurance Commission in the process of administering Medicare. (No comprehensive postcensal data is compiled on intrastate migration.) Prior to 1986 postcensal interstate migration data were based on changes of address advised to the Department of Social Security by recipients of the Family Allowance.

Interstate migration has had an important influence on the distribution of Australia's population amongst the States and Territories. Historically it has been much more important than differential fertility or mortality and in many periods more important than overseas migration. Net interstate migration tends to be volatile in nature and large gains and losses have been recorded by all States. The table below presents estimates of net interstate migration for the financial years from 1981-82 to 1988-89.

NET INTERSTATE MIGRATION, AUSTRALIA

Year ended 30 June	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*
1982	-19.6	-14.4	35.5	-4.9	3.6	-2.0	2.1	-0.2
1983	-17.2	-5.1	20.8	-0.3	1.5	-1.2	0.5	1.0
1984	-10.3	-3.3	10.0	0.6	0.7	0.7	0.7	0.9
1985	-9.3	-5.8	12.9	-2.3	2.0	0.8	0.6	1.2
1986	-12.5	-13.2	16.5	-1.4	9.4	-0.1	-0.5	1.8
1987	-10.3	-13.4	18.1	-3.2	10.4	-2.8	-1.4	2.7
1988	-14.2	-14.8	26.2	-0.3	8.4	-3.4	-4.6	2.8
1989	-39.1	-12.9	45.3	0.8	9.5	-1.3	-3.0	0.7

New South Wales has experienced substantial net losses, particularly to Queensland, but also to Western Australia and the Australian Capital Territory. The loss of 39.1 thousand in the year ended June 1989 was the largest ever recorded by this or any other State or Territory over a twelve month period.

Victoria has experienced net losses throughout the 1980s. These declined in the first half of the decade but have since risen again to former levels. The most popular destinations are Queensland, New South Wales and Western Australia.

Queensland has made major net gains in the 1980s, maintaining its ranking as the favourite destination for Australians moving interstate. Its net gain of 45.3 thousand in the year ended June 1989 was the highest ever recorded by it or any other State or Territory over a twelve month period.

South Australia has experienced small net losses throughout most of the 1980s, though marginal gains were posted in 1983-84 and 1988-89.

Western Australia has made consistent net gains reaching a higher plateau in the second half of the decade. It now ranks as the second most popular destination for Australians moving interstate. The major sources of new arrivals are New South Wales and Victoria.

Tasmania has experienced small net losses in all but two years of the 1980s. Marginal gains were posted in 1983-84 and 1984-85.

The Northern Territory made consistent net gains in the first half of the 1980s but has experienced small losses in more recent years. The Australian Capital Territory, with the exception of 1981-82, has made small net gains throughout the decade.

During the fifteen years from 1971 to 1986, the flow of persons interstate increased. Census data indicate that for the three five-year periods, 1971-76, 1976-81 and 1981-86, the number of interstate movers was 569,500, 651,200 and 716,555 respectively. This increase was evident for both males and females, with the sex ratio of interstate flows remaining virtually constant at 107.

Proportional to total population, the number of interstate movers numbered 46 per thousand in the 1971-76 intercensal period, rising to 49 per thousand during 1976-81 and 50 per thousand in the 1981-86 period.

INTERSTATE MOVERS BY AGE, MOBILITY RATES(a) AND SEX RATIOS(b), AUSTRALIA

Age group years	Number of interstate movers			Mobility rates		
	1971-76	*1976-81*	*1981-86*	*1971-76*	*1976-81*	*1981-86*
1–4	..	..	..	..	..	..
5–9	69,810	75,603	69,830	56	61	60
10–14	49,979	59,096	62,803	40	46	49
15–19	49,899	53,025	59,331	41	42	45
20–24	83,239	89,139	92,223	75	72	72
25–29	99,102	100,337	110,169	88	85	85
30–34	64,271	85,729	89,571	68	72	73
35–39	42,174	55,606	73,719	52	57	60
40–44	27,380	34,104	44,539	38	42	45
45–49	22,328	21,948	27,629	29	30	34
50–54	17,993	19,155	19,134	24	25	27
55–59	12,933	16,929	18,700	21	23	26
60–64	11,008	14,769	18,214	20	25	26
65 and over	19,402	25,745	30,693	16	18	19
Total	**569,518**	**651,185**	**716,555**	**46**	**49**	**50**
Sex ratios—						
Interstate movers	106	107	107			
Total population	100	100	100			

(a) Interstate movers per 1,000 population of Australian residents enumerated in the Census at the end of the period. *(b)* The number of males per 100 females.

Interstate mobility rates by age have revealed a clear and consistent life cycle pattern in the propensity of persons to move interstate. Looking at the five-yearly migration data, there was, initially, an above-average rate for the 5–9 year age group because of the high mobility of their parents. This was followed by a period of below average mobility in the early teenage years. Mobility was highest at ages 20–39 years, from whence it steadily declined with age. The highest mobility rates occurred at ages 25–29 years and the lowest at ages 65 and over. Females were generally less likely to move interstate than males, with differences being most pronounced during the child-rearing ages from 25 to 45 years.

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7

LABOUR

The principal subjects covered in this chapter are labour force, unemployment, wage rates, earnings, hours of work, labour costs, 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, etc.). 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.

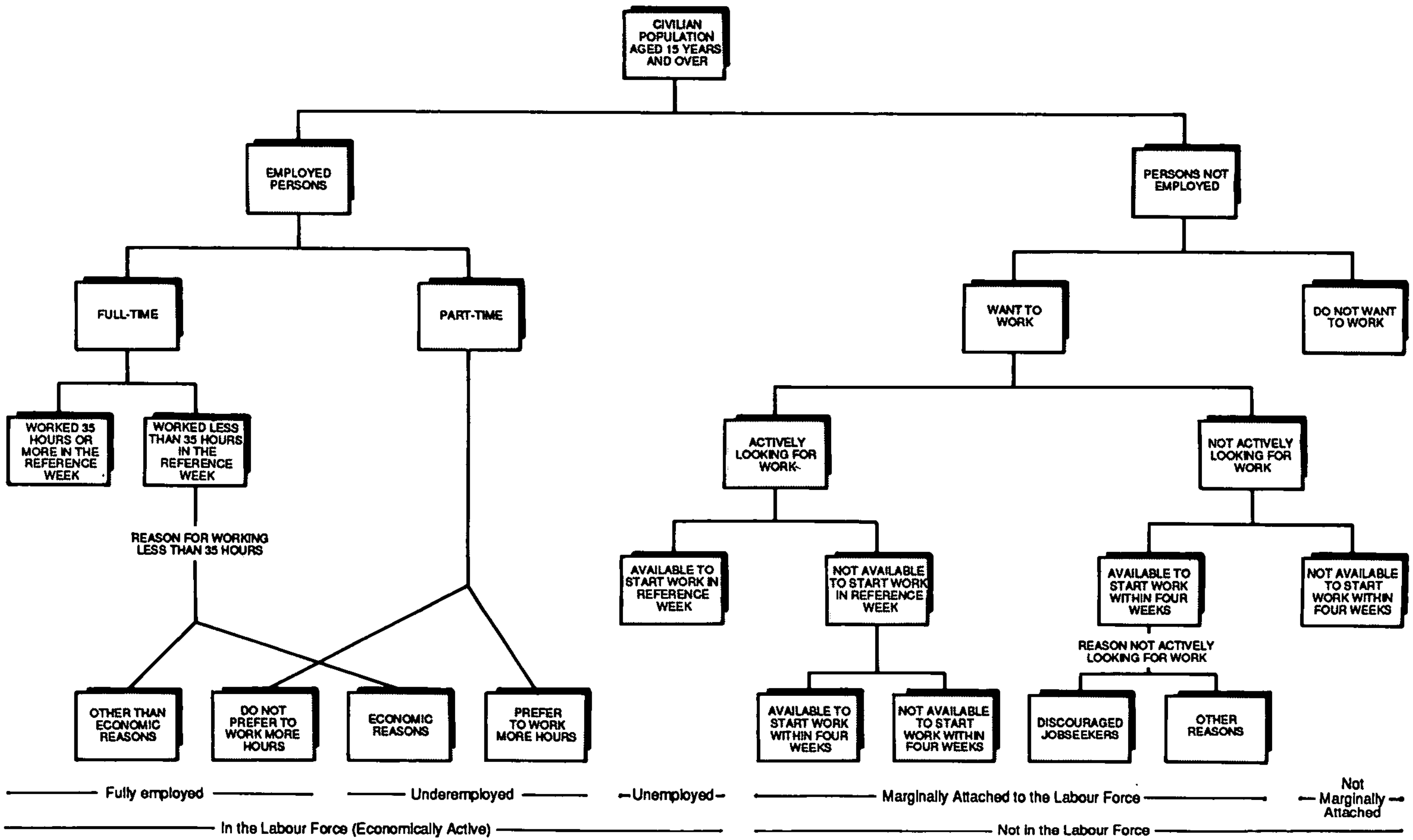
Australian labour force framework

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 the next page.

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.

THE AUSTRALIAN LABOUR FORCE FRAMEWORK



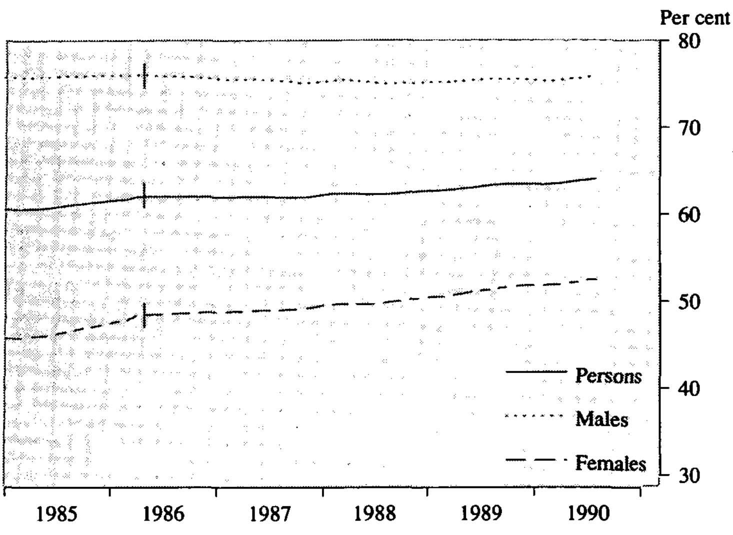
LABOUR FORCE: SOURCES OF GROWTH
(per cent)

	Males			*Females*			*Persons*		
		Percentage points change due to			*Percentage points change due to*			*Percentage points change due to*	
Annual average(a)	*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*
1984–1985	1.0	1.9	-0.9	3.3	1.8	1.6	1.9	1.8	0.0
1985–1986	2.1	2.1	0.0	5.8	2.0	3.7	3.5	2.0	1.5
1986–1987	1.8	2.2	-0.4	5.0	2.1	2.8	3.1	2.1	0.9
1987–1988	1.7	2.1	-0.4	3.5	2.1	1.4	2.4	2.1	0.3
1988–1989	1.9	2.1	-0.2	4.1	2.0	2.0	2.8	2.1	0.7
1989–1990	2.4	1.9	0.5	4.7	1.8	2.8	3.3	1.9	1.4

(a) Averages calculated on monthly estimates.

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.

PARTICIPATION RATES (a)



(a) Trend (smoothed seasonally adjusted) estimates. I Indicates break in series. Estimates for the period prior to April 1986 are based on an earlier definition. See text for explanation.

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. The second table shows changes in labour force status over time.

CIVILIAN LABOUR FORCE, BY AGE, ANNUAL AVERAGE(a), 1989–1990

	Number ('000)					*Participation rate (per cent)*				
		Females					*Females*			
Age group	*Males*	*Married*	*Not married*	*Total*	*Persons*	*Males*	*Married*	*Not married*	*Total*	*Persons*
15–64	4,831.0	2,038.0	1,388.6	3,426.6	8,257.6	84.9	58.3	66.6	61.4	73.3
15–19	442.4	14.9	396.2	411.1	853.5	62.0	57.4	60.0	59.9	60.9
20–24	604.1	145.9	367.7	513.6	1,117.7	89.8	66.7	83.5	77.9	83.9
25–34	1,313.3	614.8	294.5	909.3	2,222.6	94.7	61.2	77.6	65.7	80.2
35–44	1,200.7	723.9	175.9	899.9	2,100.6	94.1	70.7	74.3	71.4	82.8
45–54	812.0	412.9	107.9	520.8	1,332.8	89.5	59.5	63.1	60.2	75.2
55–59	276.4	86.7	29.3	115.9	392.3	75.0	31.7	34.6	32.4	54.0
60–64	182.1	39.0	17.1	56.1	238.2	50.0	15.3	15.0	15.2	32.5
65 and over	73.8	13.0	10.8	23.9	97.6	9.2	2.9	1.7	2.2	5.2
Total	**4,904.7**	**2,051.1**	**1,399.5**	**3,450.5**	**8,355.2**	**75.5**	**52.1**	**51.4**	**51.8**	**63.5**

(a) Averages calculated on monthly estimates.

CIVILIAN POPULATION AGED 15 AND OVER: LABOUR FORCE STATUS

		Unemployed							
Annual average(a)	*Employed*	*Looking for full-time work*	*Looking for part-time work*	*Total*	*Labour force*	*Not in the labour force*	*Civilian population aged 15 years and over*	*Unemployment rate*	*Participation rate*
				—'000—				—per cent—	
				MALES					
1984–1985	4,073.1	346.7	24.9	371.5	4,444.6	1,414.7	5,859.3	8.4	75.9
1985–1986	4,197.5	312.5	28.2	340.7	4,538.1	1,441.6	5,979.8	7.5	75.9
1986–1987	4,254.1	336.1	29.8	365.9	4,620.0	1,490.1	6,110.1	7.9	75.6
1987–1988	4,354.4	310.7	34.3	345.0	4,699.4	1,540.8	6,240.2	7.3	75.3
1988–1989	4,494.3	263.4	32.4	295.9	4,790.2	1,580.6	6,370.8	6.2	75.2
1989–1990	4,622.2	248.2	34.4	282.6	4,904.7	1,587.7	6,492.4	5.8	75.5
				FEMALES					
1984–1985	2,506.2	177.9	70.0	247.9	2,754.1	3,278.5	6,032.6	9.0	45.7
1985–1986	2,662.5	174.3	76.5	250.8	2,913.3	3,237.1	6,150.4	8.6	47.4
1986–1987	2,790.2	189.4	79.8	269.3	3,059.5	3,221.1	6,280.6	8.8	48.7
1987–1988	2,901.9	183.1	82.4	265.5	3,167.4	3,244.9	6,412.3	8.4	49.4
1988–1989	3,056.9	160.9	78.3	239.2	3,296.0	3,246.8	6,542.8	7.3	50.4
1989–1990	3,218.1	154.8	77.6	232.4	3,450.5	3,212.4	6,662.9	6.7	51.8

(a) Averages calculated on monthly estimates.

The age at which a person leaves full-time education 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 1989

	Leavers aged 15 to 19			Leavers aged 20 to 24			Total(b)		
Labour force status	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
					—'000—				
Labour force	111.6	97.7	209.4	31.2	31.7	62.9	161.6	150.6	312.2
Employed	97.1	82.0	179.1	27.7	27.2	54.9	141.4	127.7	269.2
Full-time	87.4	65.2	152.5	25.8	21.5	47.3	129.3	100.4	229.7
Part-time	9.7	16.9	26.6	*1.9	5.7	7.5	12.1	27.4	39.5
Unemployed	14.5	15.7	30.2	3.5	4.5	8.0	20.2	22.9	43.0
Not in labour force	5.5	7.7	13.2	*1.4	*2.4	3.8	9.2	14.2	23.4
Total	**117.2**	**105.4**	**222.6**	**32.6**	**34.1**	**66.7**	**170.8**	**164.8**	**335.6**
					—per cent—				
Unemployment rate	13.0	16.1	14.4	11.2	14.3	12.8	12.5	15.2	13.8
Participation rate	95.3	92.7	94.1	95.7	93.0	94.3	94.6	91.4	93.0

(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. *(b)* Includes leavers aged 25 to 64.

CIVILIAN POPULATION AGED 15 TO 69(a): EDUCATIONAL ATTAINMENT AND LABOUR FORCE STATUS, FEBRUARY 1990

	Employed								
Educational attainment	Full-time	Part-time	Total	Unemployed	Labour force	Not in labour force	Total	Unemployment rate	Participation rate
				—'000—				—per cent—	
				MALES					
With post-school qualifications	2,213.9	97.6	2,311.5	83.8	2,395.2	319.6	2,714.8	3.5	88.2
Degree	507.2	28.3	535.4	19.6	555.1	46.0	601.1	3.5	92.3
Trade qualification or apprenticeship	1,130.5	38.0	1,168.5	39.8	1,208.3	193.7	1,402.1	3.3	86.2
Certificate or diploma	547.7	30.3	578.0	23.0	600.9	73.7	674.6	3.8	89.1
Other	28.5	*1.0	29.5	*1.4	30.9	6.2	37.1	*4.5	83.3
Without post-school qualifications(*b*)	2,004.7	170.5	2,175.2	203.1	2,378.4	546.4	2,924.8	8.5	81.3
Attended highest level of secondary school available	516.1	79.1	595.2	47.6	642.8	114.9	757.7	7.4	84.8
Did not attend highest level of secondary school available	1,474.2	89.4	1,563.6	153.5	1,717.1	422.2	2,139.4	8.9	80.3
Left at age—									
18 and over	38.1	4.4	42.5	5.3	47.8	6.5	54.3	11.1	88.1
16 or 17	581.1	28.4	609.5	57.6	667.2	64.3	731.4	8.6	91.2
14 or 15	744.7	47.6	792.3	79.5	871.8	251.7	1,123.5	9.1	77.6
13 and under	110.4	8.9	119.3	11.1	130.4	99.8	230.2	8.5	56.7
Never attended school	5.8	*1.5	7.3	*0.6	7.9	7.7	15.6	*7.7	50.8
Still at school	*1.4	61.1	62.5	16.2	78.7	205.9	284.6	20.6	27.6
Total	**4,220.0**	**329.2**	**4,549.2**	**303.1**	**4,852.3**	**1,071.9**	**5,924.2**	**6.2**	**81.9**
				FEMALES					
With post-school qualifications	904.3	453.1	1,357.4	84.5	1,441.9	542.3	1,984.2	5.9	72.7
Degree	224.5	74.4	299.0	17.9	316.9	69.7	386.6	5.7	82.0
Trade qualification or apprenticeship	54.5	32.9	87.4	6.5	93.9	61.6	155.5	6.9	60.4
Certificate or diploma	614.3	340.0	954.3	57.5	1,011.9	403.3	1,415.1	5.7	71.5
Other	11.0	5.8	16.7	*2.6	19.3	7.7	27.0	*13.4	71.5
Without post-school qualifications(*b*)	1,036.3	699.4	1,735.7	174.3	1,910.0	1,699.2	3,609.2	9.1	52.9
Attended highest level of secondary school available	305.6	167.2	472.9	49.0	521.9	256.1	778.0	9.4	67.1
Did not attend highest level of secondary school available	722.8	527.5	1,250.3	123.6	1,373.9	1,415.4	2,789.4	9.0	49.3
Left at age—									
18 and over	15.1	8.1	23.1	*3.2	26.3	13.3	39.6	*12.0	66.4
16 or 17	326.2	200.7	526.8	52.6	579.4	350.4	929.8	9.1	62.3
14 or 15	340.2	293.3	633.5	62.3	695.8	856.9	1,552.7	8.9	44.8
13 and under	41.4	25.4	66.8	5.6	72.4	194.8	267.3	7.8	27.1
Never attended school	*1.3	*0.6	*1.9	*0.6	*2.5	22.8	25.3	*24.6	*9.9
Still at school	*0.3	81.4	81.7	19.9	101.6	179.1	280.7	19.6	36.2
Total	**1,940.9**	**1,233.9**	**3,174.8**	**278.7**	**3,453.6**	**2,420.6**	**5,874.2**	**8.1**	**58.8**

(a) Excludes visitors to private dwellings, some patients in hospitals and sanatoriums and inmates of reformatories, gaols, etc. *(b)* Includes persons for whom secondary school qualifications could not be determined.

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)
(per cent)

	Age group (years)—								
Annual average(b)	*15–19*	*20–24*	*25–34*	*35–44*	*45–54*	*55–59*	*60–64*	*65 and over*	*Total*
				MALES					
1984–1985	47.7	78.4	87.8	90.3	85.5	72.0	40.4	9.1	69.6
1985–1986	49.3	80.1	88.6	90.7	85.8	73.0	41.7	8.8	70.3
1986–1987	48.7	79.5	88.4	90.2	85.4	71.6	42.4	8.5	69.7
1987–1988	49.2	79.8	88.9	90.4	84.9	70.4	43.5	9.1	69.8
1988–1989	51.7	81.7	89.1	90.9	85.5	69.7	45.4	9.0	70.6
1989–1990	53.0	82.0	89.8	90.9	86.6	71.3	46.2	9.1	71.2
				FEMALES					
1984–1985	46.5	65.2	51.9	56.5	48.4	27.2	11.8	2.1	41.6
1985–1986	48.1	67.4	54.8	59.4	49.9	28.3	11.7	2.4	43.3
1986–1987	47.5	68.2	56.6	61.3	52.3	29.5	12.9	2.4	44.5
1987–1988	47.6	68.9	58.0	62.7	53.5	30.1	12.7	2.7	45.3
1988–1989	49.2	70.3	59.3	65.3	55.7	31.1	14.6	2.3	46.8
1989–1990	50.5	71.0	61.7	68.3	57.7	31.3	15.0	2.2	48.3
				PERSONS					
1984–1985	47.1	71.8	69.8	73.6	67.4	49.9	25.7	5.0	55.4
1985–1986	48.7	73.8	71.7	75.3	68.3	51.0	26.4	5.1	56.6
1986–1987	48.1	73.9	72.5	75.9	69.2	51.0	27.3	5.0	56.9
1987–1988	48.4	74.4	73.4	76.7	69.6	50.6	27.9	5.4	57.4
1988–1989	50.5	76.1	74.2	78.2	71.0	50.8	29.8	5.1	58.5
1989–1990	51.8	76.6	75.8	79.6	72.5	51.6	30.5	5.1	59.6

(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. *(b)* Averages calculated on monthly estimates.

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 reference 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. From April 1986, unpaid family helpers are those who, during the reference week, worked for one hour or more without pay in a family business or on a farm. Prior to April 1986, when a new definition was introduced, unpaid family helpers were those who worked for 15 hours or more without pay in a family business or on a farm. The change in definition resulted in employment increasing by approximately 0.5 per cent and unemployment decreasing by approximately 1.0 per cent.

EMPLOYED PERSONS: STATUS OF WORKER
('000)

Annual average(a)	*Employers*	*Self-employed*	*Wage and salary earners*	*Unpaid family helpers*	*Total*
1984–1985	342.4	663.8	5,544.6	23.2	6,574.0
1985–1986	358.9	686.4	5,765.0	39.4	6,849.7
1986–1987	335.5	724.5	5,895.1	64.6	7,019.7
1987–1988	365.2	708.4	6,080.1	65.5	7,219.2
1988–1989	367.4	734.4	6,371.9	66.5	7,540.3
1989–1990	372.4	736.0	6,661.8	60.6	7,830.9

(a) Averages calculated on quarterly estimates.

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, ANNUAL AVERAGE(a), 1989–1990

	Number ('000)			*Average weekly hours worked*		
Industry	*Males*	*Females*	*Persons*	*Males*	*Females*	*Persons*
Agriculture, forestry, fishing and hunting	303.7	122.0	425.7	49.3	29.6	43.6
Mining	92.6	11.8	104.4	41.6	35.1	40.9
Manufacturing	887.3	333.5	1,220.8	40.4	33.1	38.4
Food, beverages and tobacco	129.3	58.9	188.2	39.7	32.4	37.4
Metal products	170.6	30.8	201.4	40.9	31.9	39.5
Other manufacturing	587.5	243.8	831.3	40.4	33.4	38.4
Electricity, gas and water	98.3	10.9	109.2	36.3	32.2	35.9
Construction	523.3	76.9	600.1	40.7	21.2	38.2
Wholesale and retail trade	890.8	749.8	1,640.7	40.6	27.4	34.6
Transport and storage	317.6	79.7	397.3	41.1	30.6	39.0
Communication	100.2	39.7	140.0	35.1	31.3	34.0
Finance, property and business services	458.6	437.8	896.5	41.2	31.4	36.4
Public administration and defence	208.0	137.2	345.2	36.4	31.0	34.2
Community services	481.1	886.8	1,367.9	39.0	29.5	32.9
Recreation, personal and other services	252.9	330.4	583.2	39.0	27.7	32.6
Total	**4,614.5**	**3,216.4**	**7,830.9**	**40.6**	**29.4**	**36.0**

(a) Averages calculated on quarterly estimates.

The following table sets out the distribution of employed persons across occupations.

EMPLOYED PERSONS BY OCCUPATION, ANNUAL AVERAGE(a), 1989–1990
('000)

Occupation(b)	*Males*	*Married females*	*All females*	*Persons*
Managers and administrators	654.0	159.9	198.1	852.1
Professionals	586.3	236.4	390.9	977.2
Para-professionals	253.5	126.8	203.4	457.0
Tradespersons	1,109.9	67.0	123.2	1,233.1
Clerks	306.8	649.9	1,035.0	1,341.8
Salespersons and personnel service workers	417.6	361.0	734.9	1,152.6
Plant and machine operators, and drivers	494.0	71.5	98.0	592.0
Labourers and related workers	792.3	295.3	432.7	1,225.0
Total	**4,614.5**	**1,967.8**	**3,216.4**	**7,830.9**

(a) Averages calculated on quarterly estimates. *(b)* Classified according to the *Australian Standard Classification of Occupations* (ASCO), 1986.

Full-time workers are those who usually work 35 hours or more a week or who worked 35 hours or more during the reference week. Part-time workers are those who usually work less than 35 hours a week and who did so during the reference 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, ANNUAL AVERAGE(a), 1989–1990
('000)

	Age group (years)—								
	15–19	*20–24*	*25–34*	*35–44*	*45–54*	*55–59*	*60–64*	*65 and over*	*Total*
				MALES					
Full-time workers	257.4	497.1	1,198.3	1,122.8	754.7	239.4	142.7	42.4	4,254.9
Part-time workers	121.2	53.9	47.4	35.4	30.1	23.4	25.3	30.4	367.2
Total	**378.6**	**551.1**	**1,245.7**	**1,158.3**	**784.8**	**262.8**	**168.1**	**72.9**	**4,622.2**
				FEMALES					
Full-time workers	179.1	370.9	546.0	471.5	286.5	59.4	25.0	8.3	1,946.8
Part-time workers	168.0	97.2	308.0	388.0	212.0	52.7	30.0	15.2	1,271.3
Total	**347.1**	**468.1**	**854.0**	**859.6**	**498.5**	**112.2**	**55.1**	**23.5**	**3,218.1**

(a) Averages calculated on monthly estimates.

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 DECEMBER 1989
('000)

Sector	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Private	1,638.7	1,282.9	715.2	372.1	382.6	105.0	39.2	56.3	4,591.9
Public	552.1	452.8	255.3	150.5	157.4	54.7	22.3	68.2	1,713.4
Commonwealth	134.3	92.1	49.8	32.4	24.9	9.7	4.2	49.0	396.4
State	356.6	314.2	176.6	109.9	121.8	41.1	16.8	19.2	1,156.3
Local	61.1	46.5	28.9	8.2	10.8	3.9	1.2	..	160.7
Total	**2,190.8**	**1,735.7**	**970.5**	**522.6**	**540.0**	**159.7**	**61.5**	**124.5**	**6,305.3**

EMPLOYED WAGE AND SALARY EARNERS: INDUSTRY BY SECTOR
('000)

	Private sector				Public sector			
Industry	*Mar. 1989*	*June 1989*	*Sept. 1989*	*Dec. 1989*	*Mar. 1989*	*June 1989*	*Sept. 1989*	*Dec. 1989*
Agriculture, forestry, fishing and hunting*(a)*	..	..	..	..	7.7	7.5	7.4	7.5
Mining	78.6	76.2	75.1	77.3	6.8	6.9	6.6	6.5
Manufacturing	1,044.4	1,020.5	1,061.4	1,061.2	42.8	40.7	37.3	34.1
Electricity, gas and water	4.1	3.8	2.8	2.7	119.8	119.0	117.4	114.7
Construction	254.0	264.8	284.4	277.0	41.0	40.2	42.3	45.4
Wholesale and retail trade	1,301.4	1,280.7	1,272.2	1,314.3	4.1	4.2	4.6	4.6
Transport and storage	167.5	173.1	181.3	181.1	138.5	136.9	135.4	136.8
Communication	0.5	1.2	1.4	1.6	126.8	127.1	127.1	128.4
Finance, property and business services	669.8	663.7	674.7	711.1	105.1	106.1	108.3	112.9
Public administration and defence*(b)*	—	—	—	—	317.6	315.4	309.2	305.4
Community services	481.6	492.1	491.6	500.1	782.5	803.1	806.4	792.5
Health	233.4	232.3	233.4	236.8	290.8	292.6	291.9	290.5
Education	106.5	109.3	106.3	108.0	369.7	384.7	386.8	373.4
Other	141.7	150.5	151.9	155.4	122.0	125.7	127.7	128.6
Recreation, personal and other services	432.3	432.3	446.6	465.5	25.8	25.3	25.4	24.6
Total all industries	**4,434.2**	**4,408.5**	**4,491.5**	**4,591.9**	**1,718.5**	**1,732.3**	**1,727.5**	**1,713.4**

(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 were derived from the Transition from Education to Work Supplementary Survey conducted in May 1989.

APPRENTICES: SECTOR AND INDUSTRY, MAY 1989
('000)

	Year of apprenticeship				
	First	*Second*	*Third*	*Fourth(a)*	*Total*
Industry—					
Manufacturing	16.6	13.3	11.0	8.0	49.0
Construction	12.7	8.6	6.2	7.3	34.8
Wholesale and retail trade	11.9	11.7	10.0	10.0	43.7
Recreation, personal and other services	7.7	5.4	4.4	4.2	21.7
Other*(b)*	7.1	8.5	5.4	5.2	26.2
Sector—					
Public	5.3	5.5	4.2	3.8	18.8
Private*(c)*	50.8	42.0	32.9	31.0	156.7
Total	**56.1**	**47.6**	**37.0**	**34.8**	**175.5**

(a) Includes a small number of fifth year apprentices. *(b)* Includes agriculture, etc.; mining; electricity, gas and water; transport and storage; communication; community services; finance, property and business services; and public administration and defence. *(c)* Includes a small number of persons for whom sector could not be determined.

Unemployment

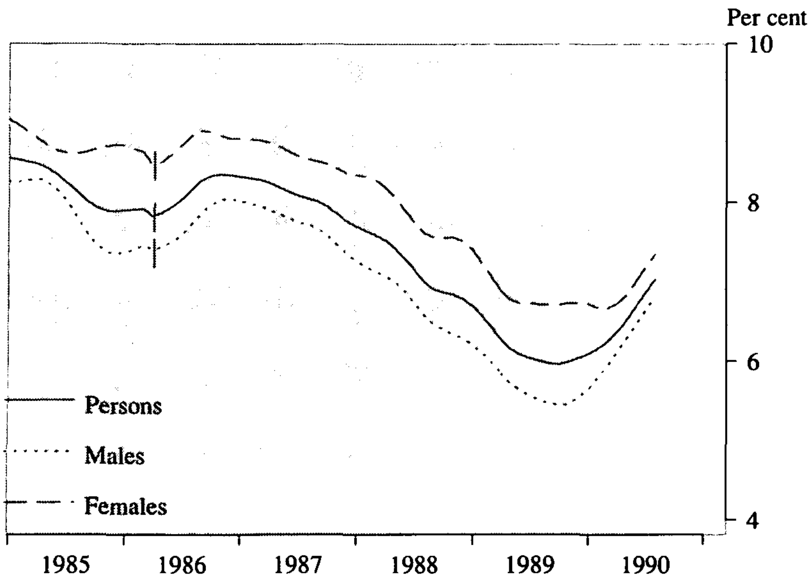
The unemployment statistics presented in this section have been derived from the ABS monthly Labour Force Survey and its supplementaries.

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 and their educational qualifications. Also shown are some summary statistics on job vacancies.

Measures of unemployment provide one indicator of the under-utilisation 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.

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.

UNEMPLOYMENT RATES (a)



(a) Trend (smoothed seasonally adjusted) estimates. I Indicates break in series. Estimates for the period prior to April 1986 are based on an earlier definition. See text for explanation.

UNEMPLOYED PERSONS: AGE AND WHETHER LOOKING FOR FULL-TIME OR PART-TIME WORK, ANNUAL AVERAGE(a), 1989–1990

	Number unemployed ('000)				*Unemployment rate (per cent)*			
Age	*Males*	*Married females*	*All females*	*Persons*	*Males*	*Married females*	*All females*	*Persons*
	LOOKING FOR FULL-TIME WORK							
Aged 15–19	*42.9*	**3.2*	*39.2*	*82.1*	*14.2*	**29.0*	*17.9*	*15.8*
Looking for first job	16.9	*0.6	17.6	34.5	..	..	..	..
Attending school	3.5	*0.0	*2.5	6.0	n.a.	n.a.	n.a.	n.a.
Attending a tertiary educational institution full-time	*1.9	*0.0	*1.8	3.7	n.a.	n.a.	n.a.	n.a.
Aged 20 and over	*205.3*	*49.1*	*115.6*	*320.9*	*4.9*	*4.5*	*6.1*	*5.3*
20–24	48.4	7.9	36.1	84.5	8.9	7.1	8.9	8.9
Looking for first job	3.9	*0.7	6.1	10.0	..	..	..	..
25–34	65.0	18.0	35.9	100.9	5.1	5.4	6.2	5.5
35–44	40.8	14.5	26.1	66.9	3.5	4.0	5.2	4.0
45–54	25.8	7.5	15.0	40.8	3.3	3.2	5.0	3.8
55 and over	25.4	*1.1	*2.4	27.9	5.7	*1.8	*2.6	5.1
Aged 15–64	*248.2*	*52.3*	*154.8*	*403.0*	*5.5*	*4.7*	*7.4*	*6.1*
Total	**248.2**	**52.3**	**154.8**	**403.0**	**5.5**	**4.7**	**7.4**	**6.1**
	LOOKING FOR PART-TIME WORK							
Aged 15–19	*20.9*	**0.8*	*24.8*	*45.7*	*14.7*	**19.3*	*12.8*	*13.6*
Attending school	14.6	*0.0	16.2	30.8	16.8	*0.0	14.8	15.6
Attending a tertiary educational institution full-time	4.7	*0.0	5.6	10.3	15.2	*0.0	13.4	14.1
Aged 20 and over	*13.4*	*37.3*	*52.8*	*66.2*	*5.2*	*4.0*	*4.6*	*4.7*
20–24	4.6	3.9	9.4	14.0	7.9	11.2	8.9	8.5
Attending a tertiary educational institution full-time	*3.0	*0.2	*3.2	6.2	*10.1	*21.2	*10.1	10.1
25–34	*2.6	14.4	19.3	21.9	*5.3	5.3	5.9	5.8
35–44	*1.7	11.5	14.2	15.8	*4.5	3.2	3.5	3.6
45 and over	4.5	7.4	9.9	14.4	3.9	2.8	3.1	3.3
Aged 15–64	*33.9*	*37.9*	*77.3*	*111.2*	*9.1*	*4.1*	*5.8*	*6.5*
Total	**34.4**	**38.0**	**77.6**	**112.0**	**8.6**	**4.0**	**5.7**	**6.4**

(*a*) Averages calculated on monthly estimates.

UNEMPLOYED PERSONS: ACTIVE STEPS TAKEN TO FIND FULL-TIME OR PART-TIME WORK, JULY 1988

	Looking for full-time work				*Looking for part-time work*			
	Males	*Females*	*Persons*		*Males*	*Females*	*Persons*	
Active steps taken to find work during current period of unemployment		—'000—		*(per cent)*		—'000—		*(per cent)*
Registered with the CES and—								
Took no other active steps	*2.9	*1.9	4.8	1.1	*0.3	*2.1	*2.4	*3.1
Contacted prospective employers	224.0	109.9	333.9	78.3	6.2	20.9	27.1	35.3
Took other active steps	18.8	8.2	26.9	6.3	*0.5	*3.2	*3.7	*4.8
Total	*245.7*	*119.9*	*365.6*	*85.7*	*7.0*	*26.2*	*33.2*	*43.2*
Not registered with the CES and—								
Contacted prospective employers	27.8	29.7	57.4	13.5	10.7	27.4	38.1	49.6
Took other active steps	*1.7	*2.0	*3.7	*0.9	*1.6	*3.9	5.5	7.2
Total	29.5	31.6	61.1	14.3	12.3	31.3	43.6	56.8
Total	**275.1**	**151.6**	**426.7**	**100.0**	**19.2**	**57.5**	**76.8**	**100.0**

The number of unemployed persons shown above 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 reference week (including the whole of the reference week) for reasons other than bad weather or plant breakdown. Active steps taken to find work (also shown above) 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.

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 complementary indicators. This is because the monthly Labour Force Survey (which collects unemployment) and a 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 public 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 of less than one day's duration; 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 dispute(s); 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; vacancies for which no effort is being made to fill the position and vacancies which are available only to persons employed by government departments or authorities.

Statistics on job vacancies are produced from a survey conducted each quarter. Background information about the job vacancies series is provided in *Information Paper: New Statistical Series: Employment, Average Weekly Earnings, Job Vacancies and Overtime* (6256.0) issued on 21 June 1984.

JOB VACANCIES: STATES AND TERRITORIES
('000)

Month	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
1986 May	21.1	16.8	4.6	2.6	4.1	1.3	1.1	2.7	54.4
1987 May	19.9	17.6	4.0	3.5	5.5	1.0	0.7	1.6	53.8
1988 May	22.0	18.6	6.6	3.1	4.8	0.7	0.7	1.9	58.5
1989 May	26.3	24.1	10.4	3.5	4.5	0.9	1.1	2.3	73.1
1990 May	19.9	12.9	7.1	4.2	2.7	1.0	0.7	2.3	50.8

JOB VACANCY RATES(a): STATES AND TERRITORIES
(per cent)

Month	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
1986 May	1.1	1.1	0.6	0.5	0.9	0.9	2.0	2.0	1.0
1987 May	1.1	1.2	0.5	0.7	1.1	0.7	1.5	1.3	1.0
1988 May	1.0	1.2	0.8	0.7	0.9	0.5	1.3	1.4	1.0
1989 May	1.2	1.5	1.2	0.7	0.9	0.6	1.9	1.7	1.2
1990 May	1.0	0.8	0.8	0.9	0.6	0.7	1.3	1.9	0.9

(a) Job vacancy rate is calculated by expressing the number of job vacancies as a percentage of the number of employees plus vacancies.

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, information has been derived from the supplementary survey of Persons not in the Labour Force. Attention is given to demographic characteristics as well as focussing on degree of attachment to the labour force. Aspects such as whether they want a job, or whether they are discouraged jobseekers, are emphasised.

CIVILIAN POPULATION AGED 15 TO 69: LABOUR FORCE STATUS
('000)

	March 1986	*Sept. 1986*	*March 1987*	*March 1988*	*Sept. 1988*	*Sept. 1989*
Persons in the labour force	7,520.8	7,589.9	7,771.2	7,966.8	7,993.2	8,316.3
Persons not in the labour force	3,507.5	3,551.4	3,496.7	3,520.2	3,620.4	3,567.1
With marginal attachment to the labour force	697.4	737.2	696.4	725.0	721.7	708.4
Wanted to work and were actively looking for work	35.2	57.0	31.1	33.6	65.7	55.3
Were available to start work within four weeks	25.0	26.7	23.6	26.9	34.8	27.7
Were not available to start work within four weeks	10.2	30.3	7.6	6.7	30.9	27.6
Wanted to work but were not actively looking for work and were available to start work within four weeks	662.3	680.2	665.3	691.4	656.0	653.1
Discouraged jobseekers	91.5	83.6	94.4	92.0	83.8	76.1
Other	570.7	596.5	570.9	599.4	572.2	577.0
Without marginal attachment to the labour force	2,810.1	2,814.2	2,800.3	2,795.2	2,898.8	2,858.7
Wanted to work but were not actively looking for work and were not available to start work within four weeks	259.6	259.9	231.8	250.3	281.3	286.3
Did not want to work	2,446.6	2,453.8	2,460.9	2,437.8	2,515.7	2,451.1
Permanently unable to work	33.3	35.5	28.8	37.5	37.2	35.1
Institutionalised*(a)* and boarding school pupils	70.5	65.0	78.8	69.5	64.7	86.2
Civilian population aged 15 to 69	**11,028.3**	**11,141.3**	**11,267.9**	**11,487.0**	**11,613.6**	**11,883.4**

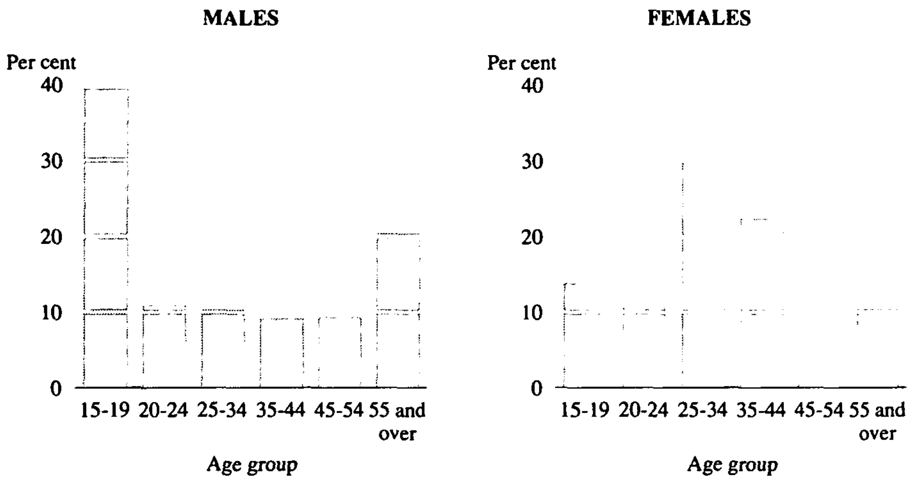
(a) Includes patients in hospitals and sanatoriums and inmates of reformatories, gaols, etc.

Persons with marginal attachment to the labour force are those who were not in the labour force in the reference 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 sub-category 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; or
- no jobs in their locality or line of work, or no jobs at all.

Some 40 per cent of males with marginal attachment were in the 15 to 19 age group and a further 20 per cent were aged 55 and over. For females 30 per cent were in the 25 to 34 age group, followed by 22 per cent in the 35 to 44 age group.

PERSONS NOT IN THE LABOUR FORCE WITH MARGINAL ATTACHMENT TO THE LABOUR FORCE: AGE AND SEX, SEPTEMBER 1989



Persons Employed at Home

In the April 1989 supplementary survey to the Labour Force Survey, persons aged 15 and over were asked information about the jobs in which they were employed at home.

Of the estimated 7,683,200 persons aged 15 and over who were employed in April 1989, 266,600 persons were employed at home; 33 per cent of those employed at home were aged between 35 and 44 and a further 26 per cent were aged 25 to 34.

Females accounted for 70 per cent of all persons who were employed at home, with 27 per cent of these women working at home because their children were too young or decided to look after their children.

A summary of the results of the survey is shown in the following tables.

EMPLOYED PERSONS AGED 15 AND OVER: AGE AND WHETHER WORKED AT OR EMPLOYED AT HOME, APRIL 1989
('000)

	Employed				
		Worked some hours at home			
Age	Worked no hours at home	Usually worked less hours at home than elsewhere	Persons employed at home	Total(a)	Total
		MALES			
15–24	857.1	46.2	4.3	73.9	931.0
25–34	959.4	224.9	13.2	264.4	1,223.8
35–44	774.9	307.7	26.3	367.8	1,142.6
45–54	529.8	180.4	17.0	232.5	762.2
55–64	317.0	76.1	14.0	117.3	434.3
65 and over	37.3	14.3	5.5	32.4	69.7
Total	*3,475.5*	*849.6*	*80.3*	*1,088.2*	*4,563.7*
		FEMALES			
15–24	762.7	36.4	7.7	50.0	812.6
25–34	629.9	129.7	57.0	199.3	829.2
35–44	582.4	142.7	62.0	227.9	810.3
45–54	358.7	66.8	37.4	123.7	482.4
55–64	113.4	20.7	18.2	51.1	164.5
65 and over	10.4	*2.2	4.0	10.1	20.5
Total	*2,457.6*	*398.5*	*186.2*	*662.0*	*3,119.6*
		PERSONS			
15–24	1,619.8	82.6	12.0	123.9	1,743.7
25–34	1,589.3	354.6	70.2	463.6	2,053.0
35–44	1,357.3	450.4	88.3	595.7	1,952.9
45–54	888.5	247.2	54.4	356.1	1,244.7
55–64	430.4	96.7	32.1	168.4	598.8
65 and over	47.7	16.6	9.6	42.5	90.2
Total	**5,933.0**	**1,248.1**	**266.6**	**1,750.2**	**7,683.2**

(a) Includes 235,400 persons comprising farmers (ASCO unit groups 1401 and 8201) who worked more hours at home than away in their main job, unpaid voluntary workers and persons who worked less than one hour at home.

PERSONS EMPLOYED AT HOME: INDUSTRY AND WHETHER JOB WORKED AT HOME WAS MAIN JOB, APRIL 1989
('000)

	Whether job worked at home was main job		
Industry	Main job	Second job	Total
Agriculture, forestry, fishing and hunting	8.7	*0.4	9.1
Manufacturing	31.9	*2.5	34.4
Construction	35.6	*2.3	37.9
Wholesale and retail trade	42.4	4.7	47.1
Transport and storage	8.5	*0.8	9.3
Finance, property and business services	41.1	6.0	47.1
Community services	37.7	3.5	41.2
Recreation, personal and other services	32.9	4.4	37.2
Other(a)	*2.7	*0.5	*3.2
Total	**241.5**	**25.0**	**266.6**

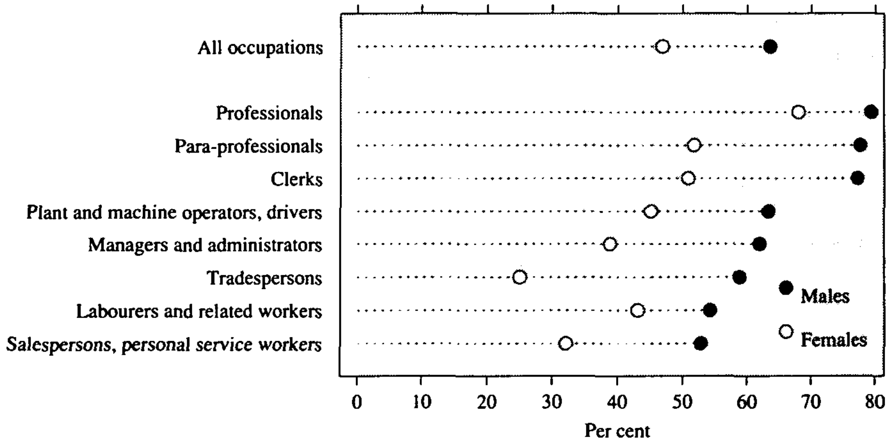
(a) Includes mining, electricity, gas and water, communication and public administration and defence.

Superannuation

In the November 1988 supplementary survey to the Labour Force Survey, persons aged 15 to 74 were asked whether they were covered by a superannuation scheme and, if so, details of that scheme. The survey provided information on those persons covered by superannuation schemes, those previously covered and those not covered. Details of gross weekly pay, expected main source of income and full-time or part-time status were also collected.

The following graph shows that amongst full-time workers, 63 per cent of males had superannuation coverage, compared with 47 per cent of female full-time workers. Occupation groups with a high proportion of full-time workers covered by superannuation were professionals, para-professionals and clerks.

FULL-TIME WORKERS AGED 15 TO 74: PERCENTAGE COVERED BY A SUPERANNUATION SCHEME AND OCCUPATION, NOVEMBER 1988



FULL-TIME WORKERS AGED 15 TO 74: SUMMARY OF CHARACTERISTICS AND SUPERANNUATION SCHEME COVERAGE, NOVEMBER 1988
('000)

	Covered			*Not covered*			*Total*		
	Males	*Females*	*Persons*	*Males*	*Females*	*Persons*	*Males*	*Females*	*Persons*
Age group—									
15–19	68.1	27.1	95.3	183.6	154.7	338.3	251.7	181.8	433.6
20–24	217.1	144.7	361.8	261.3	223.1	484.4	478.4	367.8	846.2
25–34	765.6	255.5	1,021.1	394.8	247.1	641.9	1,160.3	502.6	1,663.0
35–44	795.6	256.6	1,052.2	309.3	192.1	501.5	1,104.9	448.8	1,553.7
45–54	535.8	135.7	671.5	182.7	115.3	298.0	718.5	251.0	969.5
55–64	234.0	44.5	278.6	150.3	42.0	192.3	384.4	86.5	470.9
65–74	10.2	*1.2	11.4	27.6	8.7	36.3	37.8	9.8	47.7

For footnotes *see* end of table.

FULL-TIME WORKERS AGED 15 TO 74: SUMMARY OF CHARACTERISTICS AND SUPERANNUATION SCHEME COVERAGE, NOVEMBER 1988—*continued*
('000)

	Covered			*Not covered*			*Total*		
	Males	*Females*	*Persons*	*Males*	*Females*	*Persons*	*Males*	*Females*	*Persons*
Family status—									
Member of a family(*a*)	2,223.2	672.5	2,895.7	1,189.2	776.1	1,965.3	3,412.4	1,448.6	4,861.1
Husband or wife	1,915.8	485.5	2,401.3	802.7	475.5	1,278.2	2,718.5	961.0	3,679.5
With dependants present	1,260.8	224.9	1,485.7	493.3	236.3	729.7	1,754.1	461.2	2,215.3
Without dependants present	655.0	260.6	915.6	309.4	239.2	548.6	964.4	499.8	1,464.2
Not-married family head	44.4	64.4	108.8	21.4	53.4	74.8	65.8	117.8	183.6
With dependants present	23.4	43.0	66.4	9.4	34.2	43.6	32.8	77.2	110.0
Without dependants present	21.0	21.4	42.4	12.1	19.2	31.3	33.0	40.6	73.6
Other child/relative of family head	260.5	122.6	383.2	359.3	246.1	605.4	619.8	368.7	988.6
Not a member of a family	314.3	145.0	459.3	241.0	147.8	388.9	555.3	292.9	848.2
Living alone	169.8	73.3	243.1	95.5	50.9	146.4	265.3	124.1	389.5
Not living alone	144.5	71.8	216.2	145.5	97.0	242.5	290.0	168.7	458.7
Family status not determined	88.9	47.9	136.8	79.4	59.1	138.5	168.3	107.0	275.3
Status of worker—									
Employers	129.9	23.0	152.9	134.7	44.4	179.1	264.6	67.4	332.0
Self-employed/unpaid family helpers	177.2	17.2	194.4	266.8	90.2	357.0	444.0	107.4	551.4
Employees	2,319.3	825.2	3,144.5	1,106.3	842.7	1,949.0	3,425.6	1,667.9	5,093.5
Payment in kind	*0.0	*0.0	*0.0	*1.8	*5.8	7.6	*1.8	*5.8	7.6
Industry—									
Agriculture, forestry, fishing and hunting	113.2	15.8	129.0	174.6	39.9	214.5	287.8	55.7	343.5
Mining	78.3	*3.7	82.0	8.7	*2.8	11.5	87.0	*6.5	93.5
Manufacturing	592.1	123.9	716.0	299.8	133.6	433.4	891.9	257.5	1,149.4
Electricity, gas and water	85.6	8.2	93.8	10.9	*2.3	13.2	96.5	10.6	107.0
Construction	262.2	*6.8	269.0	206.6	13.8	220.4	468.8	20.6	489.4
Wholesale and retail trade	379.6	116.1	495.7	359.7	246.6	606.2	739.3	362.7	1,101.9
Transport and storage	193.6	27.6	221.2	95.0	25.7	120.6	288.6	53.2	341.8
Communication	91.7	23.9	115.7	*4.0	*5.3	9.3	95.8	29.2	125.0
Finance, property and business services	243.1	126.4	369.5	115.8	160.1	276.0	358.9	286.6	645.5
Public administration and defence	175.3	78.0	253.2	30.7	20.6	51.3	206.0	98.5	304.5
Community services	332.7	302.2	634.8	94.7	224.8	319.6	427.4	527.0	954.4
Recreation, personal and other services	79.1	32.8	111.9	109.1	107.6	216.7	188.2	140.4	328.6
Occupation—									
Managers and administrators	378.2	52.7	430.9	231.8	83.0	314.7	610.0	135.6	745.6
Professionals	405.8	171.3	577.0	105.6	80.8	186.3	511.3	252.0	763.4
Para-professionals	189.4	70.1	259.5	54.6	65.2	119.9	244.0	135.4	379.4
Tradespersons	618.0	21.5	639.5	432.6	64.3	496.9	1,050.6	85.9	1,136.5
Clerks	215.5	325.5	541.0	63.7	314.5	378.2	279.2	640.0	919.1
Salespersons and other personal service workers	156.0	105.5	261.5	139.4	222.8	362.2	295.4	328.3	623.7
Plant and machine operators, and drivers	289.8	38.5	328.3	167.3	46.7	214.0	457.1	85.2	542.3
Labourers and related workers	373.8	80.3	454.1	314.6	105.9	420.5	688.4	186.2	874.5
Time in current job (years)—									
Under 5	1,042.9	451.3	1,494.2	1,068.4	771.8	1,840.1	2,111.3	1,223.0	3,334.3
5 and under 10	519.0	200.4	719.4	171.2	124.0	295.2	690.2	324.4	1,014.6
10 and under 15	396.3	110.1	506.4	90.9	39.4	130.3	487.1	149.5	636.6
15 and under 20	270.8	61.0	331.8	57.4	20.1	77.5	328.2	81.2	409.4
20 and over	397.4	42.6	440.1	121.8	27.7	149.5	519.2	70.4	589.6
Total	**2,626.4**	**865.4**	**3,491.8**	**1,509.6**	**983.1**	**2,492.7**	**4,136.1**	**1,848.5**	**5,984.5**

(*a*) Includes full-time students aged 15 to 24.

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 Commonwealth 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 (CPI).

On 23 September 1983, the Commission announced that it would try once again to operate a centralised system based on prima facie full indexation. Under this new system, the Commission was to adjust its award wages and salaries every six months in relation to the last two quarterly movements of the CPI unless it was 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 CPI movements for the September and December 1983 quarters.

The hearings in February–March 1985 resulted in the recommendation of a 2.6 per cent increase based on CPI movements for the September and December 1984 quarters.

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.

In July 1986 the Commission awarded a 2.3 per cent increase, effective from 1 July 1986 in all States, except Queensland where it was effective from 7 July 1986.

In March 1987, a two tier wage fixing system superseded the CPI-based indexation. The first tier was a flat increase of $10 per week payable to all employees. The second tier was a percentage increase of up to 4 per cent, a maximum rate set by the Commission, negotiable between employees and employers.

In February 1988, the Commission awarded a flat $6 which was effective from 5 February 1988. In September 1988, the Commission again handed down a decision which allowed for a pay increase which was to be paid in two parts. The first part was an increase of 3 per cent which was payable from 1 September 1988 and the second was an increase of $10 which was not to be available less than 6 months after the first increase. Both increases were based on the Structural Efficiency principles as laid down by the Commission.

In August 1989, the Commission handed down a decision allowing for a pay increase to be paid in two parts. The first part allowed for an increase of $15 (or 3 per cent whichever was the greater) for skilled workers, $12.50 for semi-skilled workers and $10 for unskilled workers. The second part was an increase of the same amount which was not to be available less than 6 months after the first increase. Both increases were based on the Structural Efficiency principles as laid down by the Commission.

Award rates of pay indexes

The award rates of pay indexes are based on a representative sample of award designations, designed to measure trends in rates payable under awards. The indexes are based on the occupation structure existing in May 1985. The base period chosen for the indexes is June 1985. Estimates of minimum award rates of pay for each component of the series are expressed as index numbers such that June 1985=100.0.

WEEKLY AWARD RATES OF PAY INDEXES
FULL-TIME ADULT EMPLOYEES: INDUSTRY, AUSTRALIA

(Base: Weighted Average Minimum Award Rate, June 1985=100.0)
(Index Numbers)

	Males			*Females*		
	1987	*1988*	*1989*	*1987*	*1988*	*1989*
Industry			*—December—*			
Mining	114.1	121.8	128.0	112.8	121.3	126.8
Manufacturing	112.1	119.2	127.4	111.8	120.9	130.3
Food, beverages, tobacco	111.0	117.7	125.6	111.1	118.5	126.8
Textiles; Clothing, and footwear	110.9	122.5	135.2	111.7	124.1	135.4
Paper, paper products, printing and publishing	111.5	119.4	126.3	111.8	120.2	127.6
Chemicals, petroleum, and coal	111.7	118.3	125.7	111.1	118.4	126.0
Metal products, machinery and equipment	112.5	118.8	127.0	112.8	119.9	129.3
Basic metal products	111.7	117.5	125.4	111.4	117.4	126.1
Fabricated metal products; Other machinery and equipment	113.3	119.5	128.2	112.7	120.1	129.1
Transport equipment	112.1	118.9	126.7	113.2	120.0	130.4
Other manufacturing(*a*)	112.9	121.4	130.3	111.8	121.6	130.8
Electricity, gas and water	111.1	116.5	123.1	111.9	117.3	124.4
Construction	111.8	118.6	125.8	111.4	118.8	125.6
Wholesale and retail trade	111.0	118.6	127.1	110.5	118.7	127.9
Wholesale trade	111.7	119.6	127.6	110.9	119.4	127.6
Retail trade	110.5	117.6	126.6	110.3	118.4	128.1
Transport and storage	111.4	118.5	124.9	111.6	118.2	124.4
Communication	113.2	118.8	124.7	114.6	120.5	126.7
Finance, property and business services	110.1	116.7	124.1	110.3	117.6	124.5
Public administration and defence(*b*)	110.9	118.1	124.7	114.1	119.9	127.2
Community services	110.6	117.8	123.5	112.7	121.0	127.1
Recreation, personal and other services	110.6	118.2	125.9	110.4	117.8	126.5
Total all industries(*c*)	**111.5**	**118.5**	**125.6**	**111.9**	**119.9**	**127.3**

(*a*) Includes wood, wood products and furniture; non-metallic mineral products; and miscellaneous manufacturing. (*b*) Excludes employees in the defence forces. (*c*) 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 one week's earnings from a single pay period ending on or before the third Friday of the middle month 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. Weekly total earnings are gross earnings in a pay period, while weekly ordinary time earnings refers to that part of weekly 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.

AVERAGE WEEKLY EARNINGS OF EMPLOYEES, AUSTRALIA

Reference period—pay period ending on or before	Males: Full-time adults: Average weekly ordinary time earnings	Males: Full-time adults: Average weekly total earnings	Males: All males: Average weekly total earnings	Females: Full-time adults: Average weekly ordinary time earnings	Females: Full-time adults: Average weekly total earnings	Females: All females: Average weekly total earnings	Persons: Full-time adults: Average weekly ordinary time earnings	Persons: Full-time adults: Average weekly total earnings	Persons: All employees: Average weekly total earnings
	—dollars—								
1986—									
21 February	427.20	460.10	422.70	352.80	360.60	276.40	404.20	429.50	364.10
16 May	432.60	465.90	425.50	356.40	364.90	278.20	409.20	434.90	366.50
15 August	444.00	476.20	437.20	363.60	371.90	282.90	418.90	443.70	373.70
21 November	452.10	488.60	446.30	372.70	382.00	287.60	427.20	455.20	380.60
1987—									
20 February	454.40	487.70	444.50	375.70	384.10	291.00	429.60	455.10	381.30
15 May	461.30	497.40	450.90	383.00	393.10	298.90	436.20	464.00	387.30
21 August	470.30	504.50	457.00	388.90	398.20	302.30	444.20	470.50	392.50
20 November	477.50	516.30	470.00	392.00	401.90	306.50	450.10	479.70	401.80
1988—									
19 February	485.70	522.40	474.90	402.20	412.20	315.30	458.80	486.90	408.80
20 May	491.40	532.40	481.70	409.20	419.50	316.40	464.80	495.80	411.90
19 August	497.80	538.80	486.20	415.00	426.40	319.60	470.90	502.40	415.70
18 November	512.70	558.90	505.20	426.80	439.60	328.70	484.90	520.20	430.10
1989—									
17 February	521.90	563.70	511.60	431.30	443.30	334.80	492.30	524.30	436.30
19 May	530.40	576.60	519.10	440.80	453.80	339.00	501.10	536.50	442.20
18 August	539.30	585.00	527.10	446.00	459.30	342.10	508.40	543.40	446.80
17 November	547.00	595.90	540.00	454.50	467.60	349.30	516.60	553.80	457.20
1990—									
16 February	555.80	600.20	546.30	462.40	475.10	358.30	524.70	558.60	464.80

In the November survey, additional information is collected relating to part-time and junior employees, managerial staff and hours of work.

FULL-TIME NON-MANAGERIAL EMPLOYEES: AVERAGE EARNINGS AND HOURS PAID FOR, INDUSTRIES AUSTRALIA, NOVEMBER 1988

	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 ($)*	*Average weekly hours paid for*	*Average hourly earnings ($)*
ADULT EMPLOYEES									
Mining	749.60	43.6	17.19	523.90	40.9	12.81	728.30	43.3	16.80
Manufacturing	512.60	42.5	12.06	378.50	39.4	9.60	479.10	41.7	11.48
Food, beverages and tobacco	496.90	43.2	11.51	396.40	40.5	9.78	471.30	42.5	11.09
Textiles; Clothing and footwear	477.10	43.5	10.97	334.00	38.7	8.63	391.60	40.6	9.64
Paper, paper products, printing and publishing	558.00	40.8	13.68	406.20	38.9	10.44	516.50	40.3	12.83
Chemical, petroleum and coal products	601.40	41.5	14.49	446.40	38.3	11.66	555.70	40.6	13.70
Metal products, machinery and equipment	520.70	42.5	12.24	384.70	39.6	9.71	496.30	42.0	11.81
Basic metal products	578.70	42.3	13.69	446.40	38.7	11.53	568.10	42.0	13.53
Fabricated metal products; other machinery and equipment	502.40	43.1	11.66	375.60	39.5	9.51	472.60	42.2	11.19
Transport equipment	506.00	41.9	12.09	387.40	40.3	9.62	488.50	41.6	11.73
Other manufacturing	473.70	42.6	11.12	365.10	39.6	9.22	450.50	42.0	10.74
Electricity, gas and water	546.90	39.3	13.90	433.10	37.1	11.69	536.50	39.1	13.71
Construction	567.40	42.2	13.44	411.60	38.8	10.60	555.70	42.0	13.25
Wholesale and retail trade	443.70	40.8	10.87	368.50	38.9	9.46	418.80	40.2	10.42
Wholesale trade	461.00	40.6	11.35	400.80	38.7	10.34	445.70	40.2	11.10
Retail trade	422.80	41.0	10.30	349.00	39.0	8.94	392.90	40.2	9.77
Transport and storage	546.50	42.4	12.89	429.30	39.8	10.78	528.10	42.0	12.58
Communication	508.70	38.4	13.24	445.80	38.4	11.62	494.90	38.4	12.88
Finance, property and business services	536.50	39.4	13.60	429.30	38.0	11.28	481.20	38.7	12.43
Public administration and defence	492.30	38.3	12.85	452.40	37.2	12.15	478.60	37.9	12.62
Community services	546.90	38.4	14.25	473.90	37.2	12.73	503.80	37.7	13.36
Recreation, personal and other services	443.70	40.5	10.95	368.70	39.1	9.42	411.60	39.9	10.31
Total all industries	**522.30**	**40.8**	**12.80**	**429.20**	**38.2**	**11.25**	**489.90**	**39.9**	**12.28**
JUNIOR EMPLOYEES									
Mining	430.00	40.1	10.71	299.90	38.1	7.88	400.40	39.7	10.09
Manufacturing	249.10	40.3	6.18	240.00	38.8	6.18	246.90	40.0	6.18
Food, beverages and tobacco	247.70	40.6	6.10	224.40	38.6	5.82	240.80	40.0	6.02
Textiles; Clothing and footwear	263.30	40.8	6.45	245.30	38.3	6.41	252.80	39.3	6.43
Paper, paper products, printing and publishing	274.00	39.6	6.91	245.70	38.9	6.32	261.70	39.3	6.66
Chemical, petroleum and coal products	305.50	37.6	8.12	261.90	37.5	6.98	291.40	37.6	7.75
Metal products, machinery and equipment	256.50	39.7	6.46	239.40	38.8	6.17	254.00	39.6	6.42
Basic metal products	292.00	39.5	7.38	270.70	38.1	7.10	290.20	39.4	7.36
Fabricated metal products; other machinery and equipment	248.50	39.8	6.24	232.90	38.7	6.02	245.70	39.6	6.20
Transport equipment	257.70	39.4	6.54	259.90	39.7	6.54	257.90	39.5	6.54
Other manufacturing	226.00	41.4	5.46	235.70	39.7	5.94	227.50	41.1	5.53
Electricity, gas and water	308.00	37.7	8.16	288.10	37.0	7.78	303.30	37.6	8.07
Construction	286.40	40.1	7.14	225.10	37.9	5.94	281.10	39.9	7.04
Wholesale and retail trade	223.70	39.9	5.61	222.40	38.8	5.74	223.20	39.4	5.66
Wholesale trade	240.00	39.0	6.15	251.70	39.4	6.38	244.50	39.2	6.24
Retail trade	220.30	40.1	5.50	217.70	38.7	5.63	219.20	39.5	5.55
Transport and storage	265.50	39.0	6.80	248.10	38.3	6.48	259.10	38.7	6.69
Communication	273.10	38.1	7.17	259.30	37.7	6.88	268.60	37.9	7.08
Finance, property and business services	260.90	38.9	6.70	249.90	38.3	6.53	253.20	38.5	6.58
Public administration and defence	276.50	37.5	7.37	275.00	37.0	7.43	275.60	37.2	7.41
Community services	268.40	39.0	6.88	259.40	37.8	6.86	261.10	38.0	6.87
Recreation, personal and other services	230.30	40.7	5.65	180.80	39.7	4.56	191.40	39.9	4.80
Total all industries	**251.40**	**39.8**	**6.32**	**236.40**	**38.5**	**6.14**	**244.50**	**39.2**	**6.24**

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 currently conducted in May each year.

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 eleven employees are required to complete a questionnaire for every employee.

The information presented in this sub-section relates solely to the earnings data collected in the May 1989 survey. The table below sets out preliminary estimates of the composition of average weekly earnings of full-time non-managerial employees by sector for Australia.

Average weekly ordinary time earnings can vary across occupations. Details of earnings by occupation are included in the publication *Distribution and Composition of Employee Earnings and Hours, Australia* (6306.0). Occupation is classified to the Australian Standard Classification of Occupations (ASCO). Details of ASCO can be found in *ASCO, First Edition Statistical Classification* (1222.0) which was released in September 1986. An *Information Paper: ASCO—Australian Standard Classification of Occupations: Introduction to ASCO Publications—First Edition* (1221.0) was also released at that time.

COMPOSITION OF AVERAGE WEEKLY TOTAL EARNINGS FULL-TIME NON-MANAGERIAL EMPLOYEES, SECTORS, AUSTRALIA, MAY 1989(a)

	Average weekly ordinary time earnings ($)					
	Average weekly total earnings					
	Award or agreed base rate of pay	*Payment by measured result*	*Over-award and other pay*	*Total ordinary time*	*Overtime*	*Total*
			PRIVATE SECTOR			
Adult—						
Males	435.90	11.20	16.00	463.20	71.90	535.10
Females	391.60	3.20	9.60	404.40	15.10	419.50
Persons	421.10	8.50	13.90	443.50	52.80	496.30
Junior—						
Males	236.20	0.80	5.10	242.10	21.60	263.70
Females	239.30	*0.60	3.40	243.30	7.70	251.00
Persons	237.70	0.70	4.30	242.60	14.90	257.60
			PUBLIC SECTOR			
Adult—						
Males	513.60	*1.40	3.80	518.80	41.40	560.20
Females	484.90	*0.10	0.80	485.80	10.20	496.00
Persons	502.70	0.90	2.70	506.30	29.70	536.00
Junior—						
Males	270.20	*1.10	1.60	272.90	*9.40	282.30
Females	267.70	0.00	*0.50	268.10	6.10	274.20
Persons	268.80	*0.50	1.00	270.30	7.60	277.90
			TOTAL			
Adult—						
Males	463.20	7.80	11.80	482.70	61.20	543.90
Females	428.40	2.00	6.10	436.50	13.20	449.70
Persons	451.00	5.70	9.80	466.50	44.30	510.90
Junior—						
Males	241.10	0.80	4.60	246.50	19.90	266.40
Females	244.40	*0.50	2.90	247.80	7.40	255.20
Persons	242.70	0.70	3.70	247.10	13.80	260.90

(*a*) Preliminary

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. The information was collected as a supplement to the August 1989 Labour Force Survey and 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.

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 proportionally higher for males than for females in every occupation group.

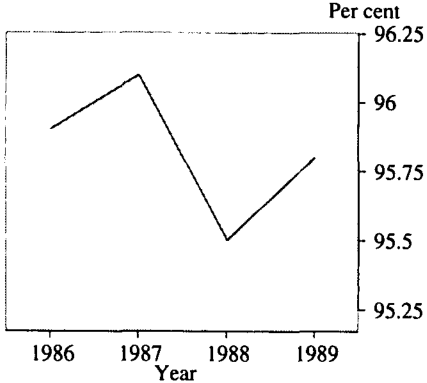
The survey also showed that employees at the highest levels of earnings were more likely to receive non-wage benefits. The exceptions were goods and services, and annual and sick leave. Children's education expenses were rarely provided. There was also an increased likelihood of receiving benefits as employees' hours of work increased.

ALL EMPLOYEES: TYPE OF BENEFIT RECEIVED AND WEEKLY EARNINGS IN MAIN JOB AUGUST 1989

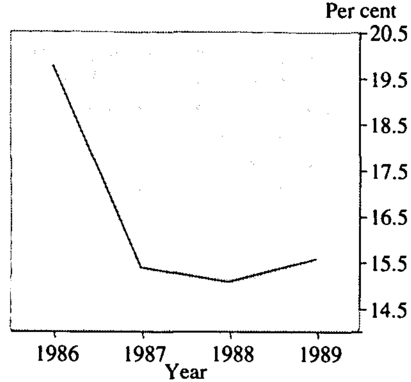
	Weekly earnings in main job (dollars)								
	Under 120	*120 and under 200*	*200 and under 280*	*280 and under 360*	*360 and under 440*	*440 and under 520*	*520 and under 600*	*600 and over*	*Total*
Total employees ('000)	**560.0**	**508.3**	**672.0**	**1,086.9**	**1,092.4**	**835.2**	**596.3**	**1,146.4**	**6,497.4**
	—Percentage of employees receiving benefit—								
Type of benefit—									
Holiday expenses	*0.5	*0.6	2.1	2.3	3.6	4.7	5.5	6.5	3.6
Low-interest finance	*0.1	0.9	1.8	1.8	2.5	3.1	3.5	4.9	2.6
Goods and services	21.4	19.2	18.4	18.1	16.1	13.9	13.1	12.8	16.2
Housing	1.9	2.5	2.4	2.3	2.0	3.5	3.5	6.4	3.2
Electricity	1.7	2.0	1.8	1.2	1.5	1.8	1.6	3.2	1.9
Telephone	3.7	3.6	4.7	3.8	5.6	9.0	11.8	19.7	8.4
Transport	5.8	6.7	8.1	8.9	13.2	20.6	24.6	35.6	16.7
Medical	1.1	1.5	2.4	2.4	2.5	3.5	4.5	7.2	3.4
Union dues	0.7	1.0	1.3	1.8	1.7	2.8	3.1	7.0	2.7
Club fees	*0.5	*0.3	0.6	0.5	0.8	1.2	1.7	4.6	1.5
Entertainment allowance	*0.1	*0.3	0.6	0.4	0.7	1.7	2.3	6.1	1.8
Shares	*0.5	0.7	0.9	1.3	1.9	2.9	3.5	5.5	2.4
Study leave	1.6	1.6	1.4	2.0	2.3	2.3	3.3	3.8	2.4
Superannuation	4.7	18.6	29.2	42.8	52.3	59.1	65.2	70.4	46.8
Child care/education expenses	*0.4	*0.3	*0.2	*0.1	*0.2	*0.3	*0.3	0.7	0.3
Sick leave	10.4	50.5	70.0	86.1	90.3	91.9	94.0	91.8	78.3
Annual leave	10.3	50.7	71.1	86.9	90.9	92.3	93.9	92.2	78.8
Long-service leave	8.2	33.8	49.8	66.4	75.0	78.9	83.6	81.8	64.4

FULL-TIME EMPLOYEES: SELECTED BENEFITS RECEIVED, AUGUST 1986 TO 1989

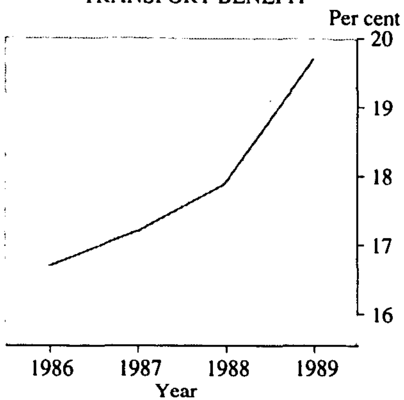
RECEIVED ONE OR MORE BENEFITS



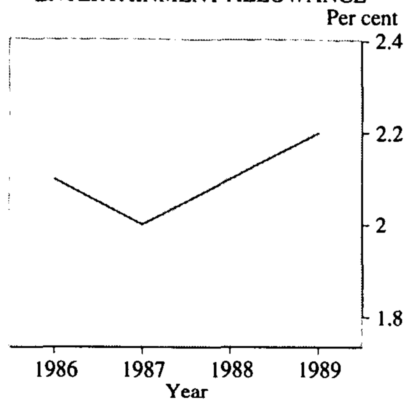
GOODS AND SERVICES



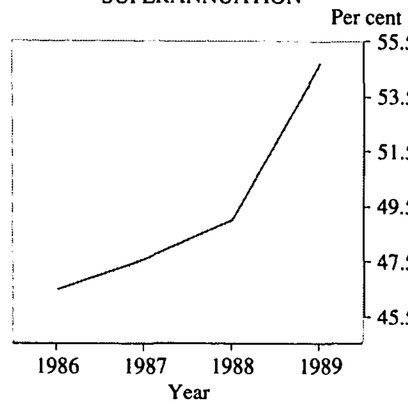
TRANSPORT BENEFIT



ENTERTAINMENT ALLOWANCE



SUPERANNUATION



ALL EMPLOYEES: TYPE OF BENEFIT RECEIVED AND HOURS WORKED IN MAIN JOB AUGUST 1989

	Hours worked in main job—						
	Under 20	*20–29*	*30–34*	*35–39*	*40*	*41 and over*	*Total*
Total employees ('000)	**1,153.1**	**520.6**	**504.8**	**1,277.3**	**1,301.2**	**1,740.4**	**6,497.4**
	—Percentage of employees receiving benefit—						
Type of benefit—							
Holiday expenses	2.4	2.4	3.8	3.2	3.8	4.7	3.6
Low-interest finance	1.2	2.9	3.0	2.8	2.7	3.0	2.6
Goods and services	18.5	17.4	15.0	14.0	13.7	18.2	16.2
Housing	1.6	1.2	2.1	1.8	3.6	6.1	3.2
Electricity	1.1	0.7	1.1	0.8	1.9	3.8	1.9
Telephone	4.5	4.2	7.4	4.9	7.1	15.9	8.4
Transport	8.4	8.2	12.6	11.6	15.8	30.5	16.7
Medical	1.8	2.8	3.8	3.1	3.5	4.8	3.4
Union dues	1.0	1.4	2.2	1.8	1.8	5.8	2.7
Club fees	0.6	*0.6	0.8	0.7	1.1	3.3	1.5
Entertainment allowance	0.4	*0.4	1.1	0.8	1.8	4.0	1.8
Shares	1.1	1.0	1.7	1.9	2.4	4.2	2.4
Study leave	1.8	1.8	3.0	2.9	2.2	2.5	2.4
Superannuation	23.7	34.3	51.4	55.6	49.0	56.5	46.8
Child care/education expenses	*0.3	*0.0	*0.1	*0.2	*0.2	0.6	0.3
Sick leave	38.2	0.0	81.3	92.6	91.5	89.1	78.3
Annual leave	38.2	60.6	81.1	93.1	92.0	90.0	78.8
Long-service leave	32.6	49.5	71.0	78.9	73.3	70.9	64.4

Labour Costs

Major labour costs statistics are produced from an annual survey of employers. This survey was conducted in respect of both private and public sector employers for the third time in 1989 and collected costs incurred by employers for gross wages and salaries; severance, termination and redundancy payments; superannuation contributions; workers' compensation; payroll tax; and fringe benefits tax for the year ended 30 June 1989.

MAJOR LABOUR COSTS, PRIVATE AND PUBLIC SECTORS: TYPE OF LABOUR COST AND INDUSTRY, 1988–89

Type of labour cost	*Mining*	*Manufacturing*	*Electricity, gas and water*	*Construction*	*Wholesale and retail trade*	*Transport, storage and communication*	*Finance, property and business services*	*Public administration and defence*	*Community services*	*Recreation, personal and other services*	*Total*
TOTAL COSTS ($ million)											
Earnings	*3,319*	*27,283*	*3,500*	*7,607*	*21,699*	*11,357*	*19,097*	*7,886*	*29,668*	*6,662*	*138,078*
Other labour costs	*489*	*3,315*	*623*	*981*	*2,151*	*1,906*	*2,320*	*1,165*	*3,171*	*454*	*16,574*
Payroll tax	171	1,312	195	254	779	559	851	111	611	180	5,023
Superannuation	154	917	307	386	653	984	890	818	1,991	119	7,219
Workers' compensation	122	936	109	305	472	322	265	211	526	131	3,397
Fringe benefits tax	42	150	12	36	*248	41	314	25	43	24	935
Total major labour costs	**3,807**	**30,598**	**4,123**	**8,588**	**23,850**	**13,263**	**21,417**	**9,051**	**32,839**	**7,116**	**154,653**
AVERAGE COSTS PER EMPLOYEE											
—dollars—											
Earnings	*40,535*	*25,375*	*30,167*	*25,213*	*17,632*	*27,863*	*24,788*	*25,426*	*22,991*	*14,477*	*22,845*
Other labour costs	*5,969*	*3,084*	*5,369*	*3,252*	*1,748*	*4,675*	*3,011*	*3,755*	*2,457*	*986*	*2,742*
Payroll tax	2,087	1,220	1,678	842	633	1,370	1,105	358	474	391	831
Superannuation	1,883	853	2,643	1,280	531	2,415	1,155	2,639	1,543	259	1,194
Workers' compensation	1,489	871	943	1,010	383	789	344	679	408	284	562
Fringe benefits tax	510	139	105	121	*201	101	408	79	33	52	155
Total major labour costs	**46,503**	**28,459**	**35,536**	**28,465**	**19,379**	**32,539**	**27,800**	**29,181**	**25,449**	**15,463**	**25,587**
Superannuation— Cost per employee covered	2,332	1,371	2,729	2,280	1,899	3,105	2,449	3,015	2,223	1,252	2,186
—per cent—											
Employees covered	80.7	62.2	96.8	56.2	27.9	77.8	47.1	87.5	69.4	20.7	54.6

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(a), ANNUAL AVERAGE(b), 1989–1990

		Females			
	Males	*Married*	*Not married*	*Total*	*Persons*
Aggregate weekly hours worked (million)	180.2	53.2	37.5	90.7	270.9
By full-time workers	174.9	39.2	32.6	71.7	246.6
By part-time workers	5.3	14.0	4.9	18.9	24.3
Average weekly hours worked	39.0	27.1	29.9	28.2	34.5
By full-time workers	41.1	37.1	36.6	36.9	39.8
By part-time workers	14.5	15.4	13.5	14.9	14.8
By wage and salary earners	37.8	27.0	29.8	28.2	33.7
By other than wage and salary earners	45.3	27.6	31.0	28.1	39.6
Average weekly hours worked by persons who worked one hour or more in the reference week	41.9	29.5	31.9	30.5	37.2
By full-time workers	44.2	40.4	39.1	39.8	42.8
By part-time workers	15.6	16.8	14.4	16.1	16.0

(a) The estimates refer to actual hours worked not hours paid for. (b) Averages calculated on monthly estimates.

The previous table 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, ANNUAL AVERAGE(b), 1989–1990

		Females		
Industry	*Males*	*Married*	*Total*	*Persons*
Agriculture, forestry, fishing and hunting	49.3	29.0	29.6	43.6
Agriculture and services to agriculture	49.7	29.3	29.8	43.8
Forestry and logging, fishing and hunting	43.6	22.8	22.5	40.3
Mining	41.6	33.9	35.1	40.9
Manufacturing	40.4	32.2	33.1	38.4
Food, beverages and tobacco	39.7	32.5	32.4	37.4
Metal products	40.9	30.2	31.9	39.5
Other manufacturing	40.4	32.3	33.4	38.4
Electricity, gas and water	36.3	31.3	32.2	35.9
Construction	40.7	18.2	21.2	38.2
Wholesale and retail trade	40.6	28.9	27.4	34.6
Wholesale trade	42.1	28.9	31.3	38.7
Retail trade	39.7	28.8	26.4	32.8
Transport and storage	41.1	27.6	30.6	39.0
Communication	35.1	30.4	31.3	34.0
Finance, property and business services	41.2	28.7	31.4	36.4
Public administration and defence	36.4	29.0	31.0	34.2
Community services	39.0	27.7	29.5	32.9
Recreation, personal and other services	39.0	27.5	27.7	32.6
All industries	**40.6**	**28.4**	**29.4**	**36.0**

(a) The estimates refer to actual hours worked, not hours paid for. (b) Averages calculated on quarterly estimates.

Statistics on overtime are produced from a survey conducted each quarter. Estimates prior to November 1983 are not strictly comparable to later estimates. Background information about the job vacancies series is provided in *Information Paper: New Statistical Series: Employment, Average Weekly Earnings, Job Vacancies and Overtime* (6256.0).

OVERTIME BY INDUSTRY

Industry	*May 1985*	*May 1986*	*May 1987*	*May 1988*	*May 1989*	*May 1990*
AVERAGE WEEKLY OVERTIME HOURS PER EMPLOYEE WORKING OVERTIME						
Mining	10.5	9.2	9.4	11.1	11.7	10.7
Manufacturing	7.7	7.8	7.9	8.3	8.7	8.8
Food, beverages and tobacco	6.3	7.3	6.8	7.3	7.4	8.1
Textiles; Clothing and footwear	8.9	7.9	8.4	7.1	9.8	11.6
Paper, paper products, printing and publishing	6.0	6.6	7.4	7.5	7.6	8.1
Chemical, petroleum and coal products	9.0	8.7	8.6	7.8	8.4	8.8
Basic metal products	9.2	9.3	9.9	10.2	10.7	9.6
Fabricated metal products; other machinery, and equipment	7.6	7.5	7.8	9.0	8.7	7.9
Transport equipment	9.3	8.4	8.9	8.9	8.8	8.7
Other manufacturing	7.1	7.9	7.6	8.2	9.3	9.4
Electricity, gas and water	7.3	7.0	7.2	7.6	7.8	7.9
Construction	7.3	7.0	8.0	8.4	8.8	8.4
Wholesale trade	6.4	6.6	6.8	6.9	6.5	7.7
Retail trade	3.5	3.9	3.7	4.4	4.5	4.6
Transport and storage; Communication	7.6	7.9	7.3	9.3	8.5	7.6
Public administration and defence*(a)*	5.0	5.3	5.0	5.7	5.9	5.7
Community services	6.3	6.0	5.9	5.8	6.3	6.3
Other*(a)*	6.1	5.2	5.4	5.7	5.4	5.4
All industries	**6.8**	**6.8**	**6.8**	**7.3**	**7.4**	**7.3**
PERCENTAGE OF EMPLOYEES WORKING OVERTIME						
Mining	42.6	46.2	44.1	44.0	47.3	52.5
Manufacturing	31.5	31.5	33.6	32.6	35.5	34.1
Food, beverages and tobacco	37.3	38.4	40.4	39.2	36.7	33.0
Textiles; Clothing and footwear	24.7	20.3	24.8	26.6	29.1	27.7
Paper, paper products, printing and publishing	19.7	19.7	24.7	24.9	25.1	25.0
Chemical, petroleum and coal products	22.0	24.0	29.3	29.3	36.4	30.7
Basic metal products	37.7	41.8	45.1	43.0	49.4	49.3
Fabricated metal products; other machinery, and equipment	31.1	33.9	35.5	30.3	40.2	36.6
Transport equipment	37.6	32.5	32.7	35.7	39.1	38.3
Other manufacturing	33.7	33.3	35.5	33.5	33.9	32.5
Electricity, gas and water	24.6	23.8	21.0	23.3	25.0	27.0
Construction	21.1	25.4	21.5	26.4	28.1	31.3
Wholesale trade	16.7	15.3	15.2	19.3	19.2	18.3
Retail trade	19.3	17.8	16.8	17.9	16.3	17.5
Transport and storage; Communication	31.9	31.5	28.6	31.2	33.0	28.3
Public administration and defence*(a)*	14.8	14.0	13.7	14.7	13.5	16.0
Community services	5.0	6.2	7.0	6.6	6.5	7.4
Other*(b)*	9.9	9.5	10.0	12.1	12.6	10.5
All industries	**18.2**	**18.1**	**18.1**	**19.0**	**19.6**	**18.7**

(a) Excludes permanent defence forces. *(b)* Includes finance, property and business services and recreation, personal and other services.

Industrial Disputes

This section presents statistics of industrial disputes involving the loss of ten working days or more at the establishments where stoppages occurred. Industrial disputes data are obtained from employers (private and government), trade unions, and from reports of government authorities.

INDUSTRIAL DISPUTES IN PROGRESS DURING EACH YEAR 1985 TO 1989: AUSTRALIA

Year	Number of disputes: Commenced in year	Number of disputes: Total(a)	Employees involved ('000): Newly involved(b)	Employees involved ('000): Total(a)	Working days lost ('000)
1985	1,876	1,895	552.7	570.5	1,256.2
1986	1,747	1,754	673.9	691.7	1,390.7
1987	1,512	1,517	593.4	608.8	1,311.9
1988	1,502	1,508	893.9	894.4	1,641.4
1989	1,391	1,402	706.4	709.8	1,202.4

(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.

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. Employees involved include those directly and indirectly involved in disputes, with the indirectly involved being only those who ceased work at establishments where stoppages have occurred but who are not party to the disputes. Working days lost refer to working days lost by workers directly or indirectly involved in disputes.

INDUSTRIAL DISPUTES IN PROGRESS DURING EACH YEAR 1985 TO 1989: WORKING DAYS LOST BY INDUSTRY ('000)

Year	Mining: Coal	Mining: Other	Manufacturing: Metal products, machinery and equipment	Manufacturing: Other	Construction	Transport and storage; Communication	Other industries (a)	All industries
1985	r233.6	106.4	r108.1	189.4	175.3	r179.8	263.7	1,256.2
1986	362.0	179.4	187.4	205.3	117.7	57.6	281.4	1,390.7
1987	291.8	55.7	199.6	195.5	194.5	92.5	282.3	1,311.9
1988	471.3	97.4	309.5	117.4	207.9	75.0	362.9	1,641.4
1989	164.8	34.2	201.1	186.7	117.0	70.7	427.9	1,202.4

(a) Includes: Agriculture, etc.; Electricity, etc.; Wholesale and Retail trade; Finance, etc.; Public administration, etc.; Community services; Recreation and personal services.

INDUSTRIAL DISPUTES IN PROGRESS DURING EACH YEAR 1985 TO 1989: WORKING DAYS LOST BY STATE ('000)

Year	NSW	Vic.	Qld	SA	WA	Tas.	Aust.(a)
1985	398.7	355.9	336.2	22.5	92.9	20.7	1,256.2
1986	598.8	381.8	r173.3	46.3	143.1	29.2	1,390.7
1987	744.8	281.4	73.7	44.6	115.3	28.0	1,311.9
1988	730.1	362.6	299.5	47.0	160.6	18.6	1,641.4
1989	589.6	348.4	100.5	35.0	102.1	10.2	1,202.4

(a) Includes the Northern Territory and the Australian Capital Territory.

The following table shows the number of working days lost per thousand employees in the years 1985 to 1989. As from 1984, the basis for calculating working days lost per thousand employees changed to include estimates of employees from the Survey of Employment and Earnings. These estimates are combined with estimates of the number of employees in agriculture and in private households obtained from the Labour Force Survey. Prior to 1984, the figures were calculated using estimates from the Labour Force Survey.

INDUSTRIAL DISPUTES IN PROGRESS DURING EACH YEAR 1985 TO 1989: WORKING DAYS LOST PER THOUSAND EMPLOYEES BY INDUSTRY

	Mining		Manufacturing					
Year	*Coal*	*Other*	*Metal products, machinery and equipment*	*Other*	*Construction*	*Transport and storage; Communication*	*Other industries*	*All industries*
1985	6,892	1,928	256	312	666	430	71	228
1986	10,741	3,328	445	328	458	135	72	242
1987	8,920	1,072	479	305	743	217	70	223
1988	15,548	1,777	750	183	725	177	85	269
1989	5,505	642	473	283	374	160	97	190

INDUSTRIAL DISPUTES IN PROGRESS DURING EACH YEAR 1985 TO 1989: WORKING DAYS LOST PER THOUSAND EMPLOYEES BY STATE

Year	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*Aust.(a)*
1985	209	236	411	48	r188	138	228
1986	304	240	207	95	272	190	242
1987	366	172	87	91	213	177	223
1988	341	214	r336	93	299	118	269
1989	269	199	102	67	187	64	190

(a) Includes the Northern Territory and the Australian Capital Territory.

INDUSTRIAL DISPUTES ENDING DURING EACH YEAR 1987 TO 1989: DURATION, CAUSE AND METHOD OF SETTLEMENT, WORKING DAYS LOST ('000)

	1987	*1988*	*1989*
DURATION			
Up to 1 day	350.1	732.9	516.4
Over 1 to 2 days	180.9	113.7	75.9
Over 2 to less than 5 days	160.1	144.2	135.9
5 to less than 10 days	261.5	r547.5	124.3
10 to less than 20 days	116.3	132.7	182.8
20 days and over	140.7	42.7	109.3
Total	**1,209.5**	**1,713.8**	**1,144.5**
CAUSE			
Wages	519.7	507.9	169.6
Hours of work	20.3	31.5	5.6
Managerial policy	330.9	897.6	625.2
Physical working conditions	88.7	158.1	61.9
Trade unionism	36.8	34.0	73.3
Other*(a)*	r213.2	84.6	208.8
Total	**1,209.5**	**1,713.8**	**1,144.5**

For footnotes *see* end of table.

INDUSTRIAL DISPUTES ENDING DURING EACH YEAR 1987 TO 1989: DURATION, CAUSE AND METHOD OF SETTLEMENT, WORKING DAYS LOST—*continued*
('000)

	1987	*1988*	*1989*
METHOD OF SETTLEMENT*(b)*			
Negotiation	211.4	176.1	185.6
State legislation	171.9	102.7	122.5
Federal and joint Federal State legislation	297.2	788.2	249.7
Resumption without negotiation	509.2	598.4	577.1
Other methods*(c)*	19.8	48.3	9.5
Total	**1,209.5**	**1,713.8**	**1,144.5**

(a) Includes 'Leave, pensions, compensation provisions etc'. *(b)* Method directly responsible for ending the stoppage of work. *(c)* Includes 'Mediation', 'Filling the places of workers on strike or locked out' and 'Closing down the establishment permanently'.

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 State and Territory each year are obtained for all trade unions and employee organisations.

In the table following, the approximate percentages of wage and salary earners in employment (i.e. employees) who were members of trade unions are shown. From 30 June 1985, the proportions of employees have been calculated from estimates of employees from the Survey of Employment and Earnings, as published quarterly in *Employed Wage and Salary Earners, Australia* (6248.0).

These estimates have been adjusted by adding estimates of employees in agriculture, forestry, fishing and hunting and in private households employing staff, from the Labour Force Survey. For statistics prior to 30 June 1985, all estimates of employees were taken from the *Labour Force, Australia* (6203.0). The percentages shown should be regarded as giving only a broad indication of the extent of union membership among employees, because they are based on estimates of employed wage and salary earners. 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: NUMBER, MEMBERSHIP AND PROPORTION OF TOTAL EMPLOYEES

	Number of separate unions(a)	*Number of members ('000)*			*Proportion of total employees (per cent)*		
		Males	*Females*	*Persons*	*Males*	*Females*	*Persons*
30 June—							
1985*(b)*	323	2,121.6	1,032.6	3,154.2	65	46	57
1986	326	2,126.5	1,059.7	3,186.2	63	44	55
1987	316	2,136.0	1,104.2	3,240.1	63	44	55
1988	308	2,166.6	1,123.8	3,290.5	62	43	54
1989	299	2,191.0	1,219.3	3,410.3	62	44	54

(a) Without interstate duplication. *(b)* Unions reported financial and total membership separately for the first time as at 30 June 1985.

TRADE UNIONS: CLASSIFICATION ACCORDING TO NUMBER OF MEMBERS
30 JUNE 1989

Size of union (number of members)	Separate unions: Number	Separate unions: Proportion of total (per cent)	Members: Number ('000)	Members: Proportion of total (per cent)
Under 100	38	12.7	1.7	0.1
100 and under 250	31	10.4	5.3	0.2
250 and under 500	26	8.7	8.9	0.3
500 and under 1,000	41	13.7	28.8	0.8
1,000 and under 2,000	42	14.0	59.5	1.7
2,000 and under 3,000	12	4.0	29.6	0.9
3,000 and under 5,000	25	8.4	98.8	2.9
5,000 and under 10,000	19	6.4	138.9	4.1
10,000 and under 20,000	19	6.4	261.3	7.7
20,000 and under 30,000	12	4.0	295.4	8.7
30,000 and under 40,000	10	3.3	350.2	10.3
40,000 and under 50,000	6	2.0	271.1	7.9
50,000 and under 80,000	7	2.3	453.1	13.3
80,000 and over	11	3.7	1,407.8	41.3
Total	**299**	**100.0**	**3,410.3**	**100.0**

In addition, a Supplementary Survey was conducted in August 1988 to provide information on the characteristics of trade union members such as their age, industry, and occupation.

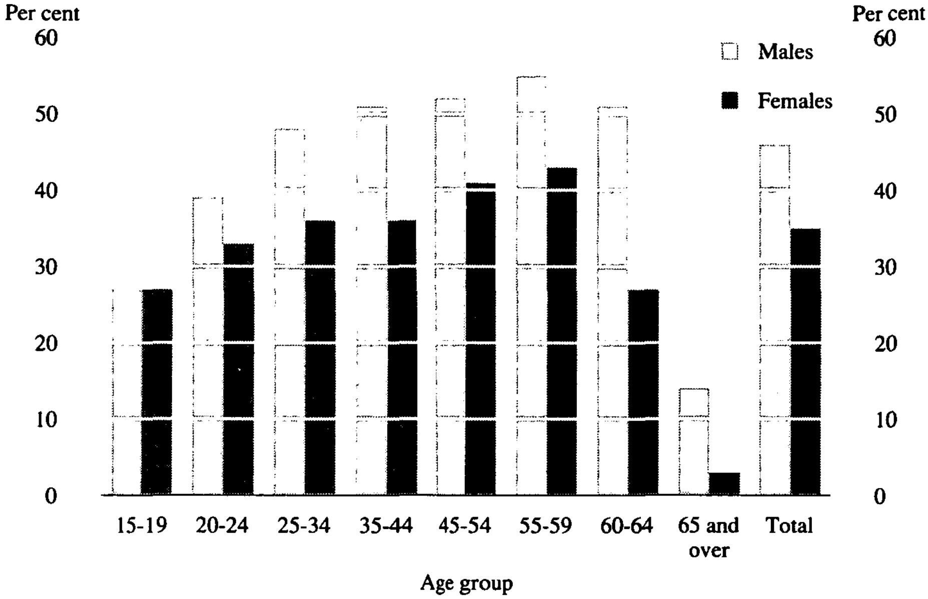
For the purposes of this Supplementary Survey, to be considered as members of a trade union persons must be employed wage and salary earners using their membership in conjunction with their main job. Selected results from this survey are shown in the following table and graph.

PROPORTION OF ALL EMPLOYEES WHO WERE TRADE UNION MEMBERS, INDUSTRY AND SECTOR, AUGUST 1988
(per cent)

Industry	Males: Public	Males: Private	Males: Total(a)	Females: Public	Females: Private	Females: Total(a)	Persons: Public	Persons: Private	Persons: Total(a)
Agriculture, forestry, fishing and hunting	62	10	13	34	11	11	57	10	13
Mining	93	65	67	100	18	19	93	61	63
Manufacturing	88	50	52	88	37	38	88	47	48
Electricity, gas and water	83	74	82	62	69	62	81	73	80
Construction	79	48	52	56	6	11	77	43	47
Wholesale and retail trade	61	20	21	37	26	26	54	23	23
Transport and storage	88	52	69	71	23	35	86	44	62
Communication	84	77	84	55	52	55	76	73	76
Finance, property and business services	71	22	28	70	20	27	70	21	28
Public administration and defence	68	71	68	48	23	48	61	48	61
Community services	68	26	56	59	25	45	63	25	49
Recreation, personal and other services	51	25	27	55	24	26	53	25	26
Total	**75**	**36**	**46**	**58**	**26**	**35**	**68**	**32**	**42**

(a) Includes persons for whom sector could not be determined.

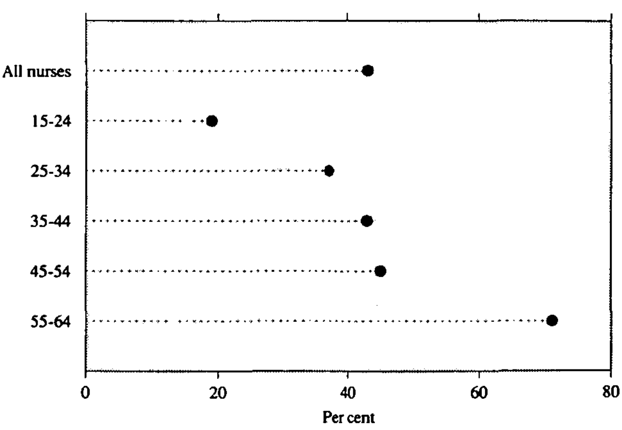
ALL EMPLOYEES: PROPORTION WHO WERE MEMBERS OF A TRADE UNION BY AGE, AUGUST 1988



Career Paths of Qualified Nurses

A national survey conducted in March to July 1989 found that of the 332,900 persons who had qualified at sometime as either a registered or enrolled nurse, 23 per cent were working outside the nursing profession and 20 per cent were not working. The graph shows how the proportion of nurses not working in the profession rises with age.

QUALIFIED NURSES, 1989
Proportion not working in nursing profession



Of the qualified nurses who had left nursing (that is, they had worked in nursing after registering, but were not working in nursing at the time of the survey), an estimated 50,800 (44 per cent) had left because of family responsibilities. More than half of those who had left would consider returning given a change in their circumstances.

Almost 140,000 qualified nurses have had a break of 12 months or more from nursing since registering with an Australian nursing board, but subsequently returned to nursing.

There were an estimated 189,400 qualified nurses working in the nursing profession—141,800 as registered nurses, 37,200 as enrolled nurses and 10,400 in other occupations.

The table below shows the number of qualified nurses in comparison with population estimates across States of usual residence.

QUALIFIED NURSES, 1989

	Number of nurses ('000)		*Nurses per thousand of the population*	
	All nurses	*Those currently in nursing*	*All nurses*	*Those currently in nursing*
New South Wales	105.4	61.3	18	11
Victoria	93.5	56.2	22	13
Queensland	48.5	25.8	17	9
South Australia	33.0	18.3	23	13
Western Australia	36.1	18.6	23	12
Tasmania	6.9	4.7	15	10
Australia	**332.9**	**189.4**	**20**	**11**

Employer Training Expenditure

This section presents estimates of the expenditure by employers on the formal training of their employees. Also provided are estimates of the paid time employees spent receiving formal training. These statistics were produced from the 1989 Training Expenditure Survey.

The survey is designed to produce national estimates of training expenditure by industry and employer size. It was first run in respect of the September quarter 1989, when 2000 employers Australia wide participated in the survey.

Formal training is defined as all training activities which have a structured plan and format designed to develop job related skills and competence. By contrast, informal training, that is, unstructured on-the-job training, being shown how to do things as the need arises or learning by doing a job, is excluded from the scope of the survey.

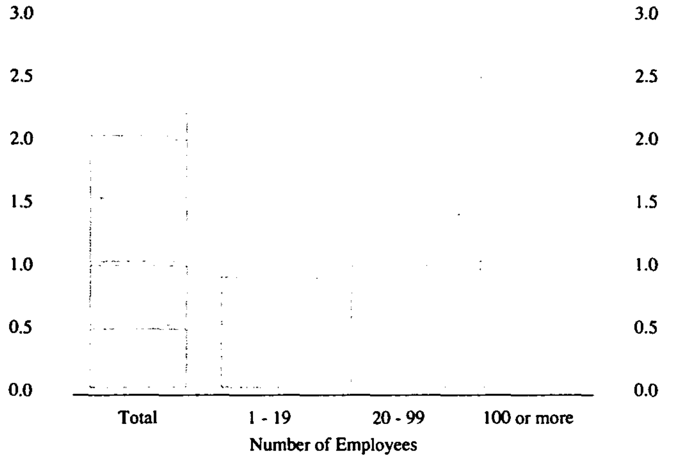
AVERAGE TRAINING EXPENDITURE—ALL EMPLOYERS, SECTOR BY EMPLOYER SIZE, JULY TO SEPTEMBER 1989

	1–19 employees	*20–99 employees*	*100 or more employees*	*Total*
PRIVATE				
	—per cent of gross wages and salaries—			
Total training expenditure	0.9	1.2	2.4	1.7
	—dollars—			
Total training expenditure per employee	41.0	65.7	149.5	97.5
	—hours—			
Training hours per employee	3.4	3.2	5.6	4.4
	—per cent of all employers—			
Employers reporting training expenditure	17.4	46.0	85.0	21.4
PUBLIC				
	—per cent of gross wages and salaries—			
Total training expenditure	*0.6	2.9	3.3	3.3
	—dollars—			
Total training expenditure per employee	*30.6	177.9	224.5	221.5
	—hours—			
Training hours per employee	*1.1	7.9	9.3	9.2
	—per cent of all employers—			
Employers reporting training expenditure	*26.9	100.0	98.8	61.4
TOTAL				
	—per cent of gross wages and salaries—			
Total training expenditure	0.9	1.3	2.8	2.2
	—dollars—			
Total training expenditure per employee	40.9	70.6	183.5	132.9
	—hours—			
Training hours per employee	3.3	3.4	7.3	5.7
	—per cent of all employers—			
Employers reporting training expenditure	17.5	47.8	88.1	22.1

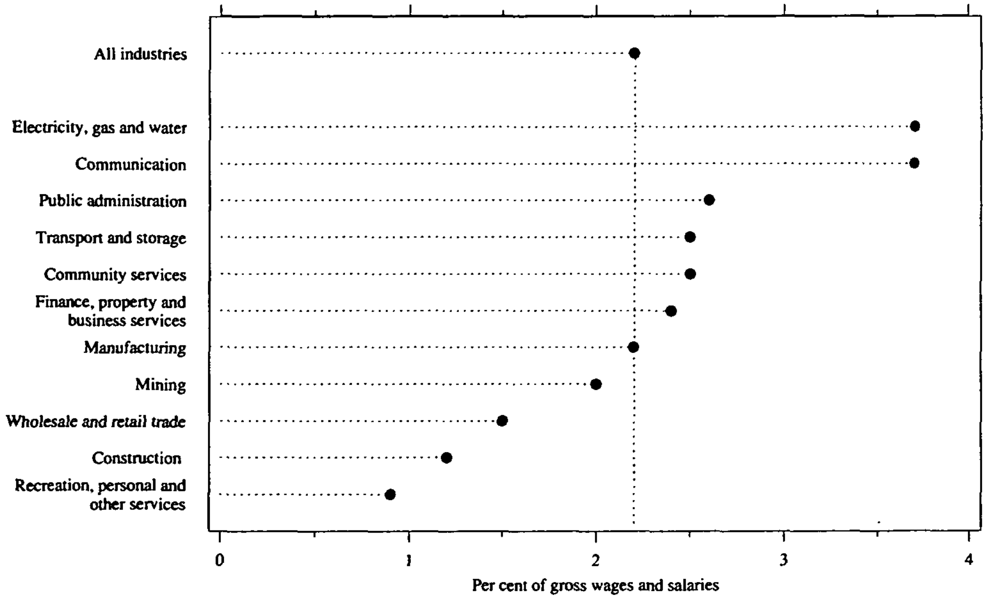
AVERAGE TRAINING EXPENDITURE—ALL EMPLOYERS SECTOR BY INDUSTRY, JULY TO SEPTEMBER 1989

	Private			*Total Private and Public*		
Industry	*In-house*	*External*	*Total*	*In-house*	*External*	*Total*
	—per cent of gross wages and salaries—					
Mining	*1.4	*0.5	*1.9	*1.5	0.5	2.0
Manufacturing	1.4	0.7	2.1	1.5	0.7	2.2
Electricity, gas and water	3.0	0.9	4.0	2.8	1.0	3.7
Construction	*0.1	0.7	0.8	*0.6	0.7	1.2
Wholesale and retail trade	1.0	0.5	1.5	1.0	0.5	1.5
Transport and storage	*0.4	*0.5	*0.9	2.1	*0.4	2.5
Communication	*0.7	*0.5	*1.1	3.2	0.5	3.7
Finance, property and business services	1.6	0.7	2.3	1.7	0.7	2.4
Public administration and defence	..	..	..	1.9	0.7	2.6
Community services	0.8	0.5	1.3	2.0	0.5	2.5
Recreational, personal and other services	*0.2	*0.6	*0.8	*0.3	*0.6	0.9
All industries	**1.1**	**0.6**	**1.7**	**1.6**	**0.6**	**2.2**

AVERAGE TRAINING EXPENDITURE - ALL EMPLOYERS
EMPLOYER SIZE, JULY TO SEPTEMBER 1989
Per cent of gross wages and salaries



AVERAGE TRAINING EXPENDITURE - ALL EMPLOYERS
INDUSTRY, JULY TO SEPTEMBER 1989



AVERAGE PAID TRAINING TIME PER EMPLOYEE(a)—ALL EMPLOYERS FIELD OF TRAINING BY SECTOR, JULY TO SEPTEMBER 1989

Field of training(b)	*In-house*	*External*	*Total*
PRIVATE			
		—hours per employee—	
Induction	0.34	*0.01	0.35
General supervision	0.26	*0.04	0.30
General computing	0.18	0.06	0.24
Health and safety	0.12	0.05	0.17
Management and professional	0.35	0.27	0.62
Technical and para-professional	0.09	0.07	0.16
Trade and apprenticeship	0.30	1.45	1.75
Clerical, sales	0.34	0.08	0.42
Plant and machinery	0.22	*0.05	0.28
Other	0.08	*0.02	0.10
All fields	*2.29*	*2.09*	*4.38*
PUBLIC			
		—hours per employee—	
Induction	0.49	*0.00	0.49
General supervision	0.30	0.05	0.35
General computing	0.30	0.15	0.45
Health and safety	0.30	0.07	0.38
Management and professional	0.88	0.55	1.42
Technical and para-professional	2.42	0.40	2.82
Trade and apprenticeship	0.96	0.38	1.34
Clerical, sales	1.18	0.11	1.30
Plant and machinery	0.24	*0.05	0.29
Other	0.27	0.05	0.32
All fields	*7.35*	*1.81*	*9.17*
TOTAL			
		—hours per employee—	
Induction	0.38	*0.01	0.39
General supervision	0.27	0.04	0.31
General computing	0.21	0.09	0.30
Health and safety	0.18	0.05	0.23
Management and professional	0.50	0.35	0.85
Technical and para-professional	0.75	0.16	0.92
Trade and apprenticeship	0.49	1.14	1.63
Clerical, sales	0.58	0.09	0.67
Plant and machinery	0.23	*0.05	0.28
Other	0.13	0.03	0.16
All fields	**3.73**	**2.01**	**5.74**

(a) The total time receiving formal training averaged over the total number of employees. *(b)* Formal training was classified according to the main content of the course or program.

Employment and Training Programs

In order to ensure that its programs were appropriate to the current needs of the labour market, in 1983 the Commonwealth Government established the Committee of Inquiry into 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 1990 are detailed as follows.

Skills Formation

Entry Level Training—ELT

The aims of Entry Level Training (ELT) are to assist in meeting the long-term quantitative and qualitative workforce skill needs of the economy and to enhance the long-term employment and career prospects of young Australians, by providing a Commonwealth contribution to the cost of entry level training under apprenticeships and the Australian Traineeship System (ATS), designed to:

- achieve quality improvements to entry level training;
- provide greater equality of access to entry level training; and
- encourage industry and young people to invest in structured training.

ELT has three components, through which these aims are achieved:

- Commonwealth Rebate For Apprentice Full-time Training Scheme;
- Australian Traineeship System; and
- Special Entry Level Training.

Commonwealth Rebate for Apprentice Full-time Training Scheme—CRAFT

The apprenticeship system has generally served Australia well over a long period of time. It has been the principal source of supply of skilled workers to the Australian labour market, has enabled a substantial reduction in Australia's reliance on migration as a source of skilled labour and, with the Australian Traineeship System, has provided significant job and structured training opportunities for school leavers.

Through CRAFT, incentives and support are provided to employers and apprentices within the framework of the State/Territory apprenticeship systems.

The objective of CRAFT is to provide an adequate number or appropriately skilled tradespeople through an apprenticeship system which maintains or improves the quality of, and equity of access to, apprentice training and, having regard to labour market conditions, maintains or increases the numbers of apprentices undergoing and completing that training.

- *Technical Education Rebate,* payable to employers to offset the costs associated with releasing their apprentices to undertake the technical education component of an approved basic trade course. Applies to all eligible employers with apprentices who commenced their apprenticeship prior to 1 January 1988.
- *Apprentice Training Incentive,* introduced on 1 January 1988 to progressively replace the Technical Education Rebate. Employers who take on, and indenture, apprentices after 1 January 1988 are able to apply for grants in respect of the commencement, recommencement and completion of an apprenticeship. From 1 July 1989, employers receive an extra $1,000 for taking on a young person classified by the CES as disadvantaged in the labour market.
- *Off-the-Job Training,* payable to employers for releasing apprentices to attend approved full-time instruction at their own or other industry training centres. Employers approved to train other employers' apprentices can also be compensated for designated training costs.
- *Living-Away-From-Home-Allowance,* available to apprentices in their first and second year of apprenticeship where there is a need to live away from home to obtain or maintain their apprenticeship.
- *Fares Assistance,* available to apprentices, in approved trades, who have to move away from home to take up an apprenticeship.

Australian Traineeship System—ATS

ATS aims to assist the long-term employment and enhance the career prospects of young people, and improve the national skills base, through fundamental improvements in arrangements for non-trades employment training by the development of broadly based structured entry level vocational training.

This program consists of a system of traineeships combining on-the-job and off-the-job training. The ATS aims to assist young people entering a particular industry or occupation and add to the stock of skills in the economy. This element of the Government's youth policy strategy was established as a stepping-stone into primary labour market jobs, to improve and increase broadly based work related training and to improve the first step in a career path for participants.

The ATS is jointly administered by the Commonwealth Government and the State and Territory Governments. Employers, unions, training authorities and governments are involved in the continuing development of the system through the development of new traineeship packages as well as the monitoring and reviewing of existing ones.

Traineeships are generally for a 12 month period and involve on-the-job training and a minimum of 13 weeks formal vocational instruction (off-the-job component) in a TAFE college or other approved training centre.

The trainee is paid a trainee wage for the duration of the traineeship which is set with reference to relevant junior rates for the time spent on the job. The trainee wage cannot be less than $108.35 per week and is adjusted in accordance with National Wage Case decisions. Since the inception of the system over 44,000 young people have commenced a traineeship in a wide range of industries and occupations. Of these over 13,600 trainees commenced in 1989–90.

Following a review of entry level training and the rapid development of award restructuring, the Traineeship System has been more flexible. This is evidenced in the availability of traineeships longer than one year and in the loosening of age restrictions to bring it closer to the apprenticeship model and hence more responsive to the needs of industry.

A range of financial support is available to assist with the development and operation of traineeships:

- a *Training Fee* of $1,000 per approved trainee to assist employers to offset the cost of providing on-the-job training. Employers are eligible to receive an additional $1,000 if they employ trainees assessed by the CES as being disadvantaged in the labour market;
- an *Off-the-Job Training Fee* (currently $1,900 to TAFE and up to $2,000 to other approved training providers) in respect of each trainee;
- a *Living Away From Home Allowance,* available to trainees where there is a need to live away from home to obtain or maintain their traineeship; and
- *Fares Assistance*, available to trainees who have to move away from home to take up a traineeship.

Special Entry Level Training—SELT

In addition to CRAFT and ATS, the Commonwealth has a number of programs directed at testing, developing and introducing innovative approaches to traditional entry-level training under the SELT component.

The objective of SELT is to provide an adequate number of appropriately trained young Australians through the provision of specially targeted assistance to:

- expand the number of available apprenticeship and traineeship opportunities;
- increase the access of special groups to apprenticeship training opportunities; and
- assist in the development of improved approaches to entry level training.

SELT assistance is provided under a number of sub-programs:

- *Special Trade Training Program*, directed at testing, developing and introducing new approaches to traditional apprentice training. The major support under the program provides for special preparatory courses for women as well as the 'Tradeswomen on the Move' projects—a joint Commonwealth/State strategy designed to encourage greater participation of young women in non-traditional trades.
- *Group Training Schemes* cover apprentices and trainees under the ATS and aim to increase training opportunities with small companies which would not be able to recruit apprentices and trainees in their own right, by indenturing apprentices/trainees to a central body, such as an employer organisation or a training company. The Commonwealth provides assistance to group training projects to offset their administrative costs.
- *Disabled Apprentice Wage Subsidy* provides a subsidy to employers who indenture a person with disabilities as an apprentice. The subsidy may be provided for up to the duration of the apprenticeship and extra help may be granted to allow necessary workplace modifications and tutorial assistance.
- *Special Assistance Program* provides a training allowance to unemployed out-of-trade apprentices to assist them in completing basic trade courses.
- *Development Grants* to approved organisations and individuals to establish competencies and standards for traineeship models and to develop on- and off-the-job training components including curricula and training materials.
- *Institutional Development Grants* to peak employer and union organisations to enable them to employ Traineeship Liaison Officers to facilitate the introduction of Traineeships.

Industry Training Support
This program has two components:

- Innovative Training Projects
- Industry Training Services

Innovative Training Projects
The Innovative Training Projects component of the Industry Training Support Program is intended to be a flexible program designed to meet identified skill requirements at both occupational and industry levels by facilitating improvements in the level and quality of skills training. Financial assistance can be provided to industry to:

- upgrade workforce skills to meet structural and technological change;
- establish industry training foundations and skill centres;
- pilot test new and innovative training arrangements;
- facilitate industry restructuring through award restructuring processes;
- develop national curricula and competency based training and assessment procedures;
- establish enterprise based skill centres;
- assist in trainer training; and
- address national skill shortage issues.

National Skills Shortages
The National Skills Shortages Program provides short-term training assistance to individuals and industry in occupations where skilled labour is in short supply. Particular emphasis is given to occupations identified as requiring temporary reliance on skilled migrants.

The primary objective of the National Skills Shortages Program is to minimise the effects of current and emerging skill shortages of national significance. Training programs are developed in conjunction with industry groups and training providers. The Department welcomes suggestions from industry groups as to areas of shortages of national significance.

The program provides:

- refresher training for persons with basic qualifications or experience but whose skills need updating;
- bridging training for overseas qualified persons seeking recognition of their qualifications in Australia; and
- skills upgrading of existing employees.

In recent years the Program has assisted training in a range of areas of identified national skill shortages including:

- nursing and other health occupations;
- the hospitality industry; and
- the computer industry.

Industry Training Services

In addition to schemes directed at the training of individuals, the Government provides assistance to industry to improve training, particularly in pursuit of micro-economic reform. Support is provided for a network of Industry Training Advisory Bodies which are autonomous, industry based and incorporated as companies or associations with membership representing employer and employee associations, the Commonwealth Government and State and Territory Governments. There are 120 National and State/Territory Industry Training Advisory Bodies covering 18 major industries representing more than half of the private sector work force.

The primary role of these Industry Training Advisory Bodies is to act as the authoritative voice on training matters within their industries and advise governments on the training implications of workplace reform, work practices and award restructuring. A secondary role is to initiate research into training matters and coordinate the development of training solutions to identified or emerging training needs.

A further component of this Program is Training Services Australia (TSA) which provides a range of public training courses and consultancy services designed to improve the utility of training in industry and the competency of those who provide it. TSA operates training centres and offers training consultancy services in all capital cities excluding Darwin.

The Commonwealth Government also supports the National Training Board (NTB). The NTB was established in February 1990 as a joint initiative of the Commonwealth Government and the State and Territory Governments of Australia. The role of the NTB is, in consultation and cooperation with industry, to ratify national skills standards for occupations and classifications in industry or enterprise awards or agreements determined by an industrial tribunal.

The NTB is incorporated as a company to provide it with the flexibility and independence necessary to respond quickly and appropriately to vocational education and training needs emerging from the structural adjustment process.

The NTB is tripartite in composition but the States and Territories constitute a majority of the Board which reflects their constitutional responsibility for the provision of vocational education and training.

Special Employment, Education and Income Support

Employment access

The Employment Access Program assists jobseekers who are disadvantaged in the labour market to gain access to and secure employment through the use of a range of training, wage subsidy and mobility measures which can be flexibly adapted to individual needs and local labour market requirements.

In February 1990 it was decided to expand the range of measures available under the Employment Access Program as part of a more active employment strategy.

There are four program components under the umbrella of the Employment Access Program: Access Assistance, Job Search Assistance, Training Assistance, and Employment Assistance. The array of available measures can be linked and adapted to suit client needs in their local labour market.

Access Assistance
Early Intervention
Early Intervention is being introduced on 1 January 1991 as a measure to assist job seekers who are unable to take advantage of available work or vocational training opportunities because they encounter a variety of personal barriers to employment.

Such barriers might include functional illiteracy, learning deficiencies or functional area skills gaps which prevent jobseekers changing to new areas of employment or adapting to new work practices or work organisation.

Early Intervention assists the transition to work or vocational preparation by providing diagnostic assessment and remedial training for jobseekers facing specific, individual employment barriers. Assistance with literacy and numeracy, and English as a Second Language (ESL) problems are a primary focus.

Post Placement Support and Contracted Employment Placement
These measures are due to be introduced from 1 July 1991. They will provide further assistance to disadvantaged jobseekers to overcome barriers to active participation in the labour market.

Under Post Placement Support the Commonwealth Employment Service (CES) or an external agency can provide support to jobseekers during the first few weeks of employment following a period of unemployment to assist them to adapt to the new working environment.

Contracted Employment Placement will establish fee for service arrangements with external agencies for placement in permanent employment of the very long term unemployed.

Job Search Assistance
Job Search Training
The Job Search Training Program (JSTP) aims to address the employment needs of jobseekers by providing them with intensive instruction in job search techniques. The program complements the Job Search Allowance (JSA) initiative for youth and is an important element of the Government's NEWSTART and Jobs, Education and Training (JET) strategies for the long-term unemployed and sole parents.

JSTP has two components—Job Clubs and Job Search Training Courses (JSTCs). Both program elements provide jobseekers with training in job search skills to improve their competitiveness in the labour market.

The program operates by funding training providers to deliver an agreed program of jobsearch training on a contractual basis. Job Clubs run for 3 weeks full-time, while JSTCs provide 22 hours training in total.

During 1989–90 10,371 jobseekers took part in the 100 Job Clubs across the country and 8,182 undertook a JSTC. Forty-six per cent of Job Club participants and twenty-five per cent of JSTC participants are known to be in employment 3 months after completing their Job Search Training. In 1989–90 the expenditure for JSTP was $5.9 million. The estimate for 1990–91 is $8.7 million.

A number of enhancements scheduled to commence from 1 January 1991 will be introduced to this program. These enhancements will include:

- an additional 15 Job Clubs;
- a restructuring of existing Job Search Training Course arrangements to enable continuous entry courses to be established in several key locations; and
- the linking of job search training assistance to the information and advisory services provided by the CES by means of targeted videos, enhanced printed materials and translation into community languages.

Training Assistance

JOBTRAIN

The JOBTRAIN program provides opportunities for the long-term unemployed or other especially disadvantaged jobseekers to receive vocational training based on opportunities in the local labour market.

The program assists people who have been unemployed for at least six out of the past nine months or are otherwise especially disadvantaged in the labour market, e.g. people with disabilities, Aboriginals, sole parents, people born overseas with English language or cultural difficulties, women returning to the workforce after a prolonged absence, young people deemed 'at risk' and other special needs jobseekers.

Priority within JOBTRAIN has been given to providing additional assistance to:

- sole supporting parents under the Jobs, Education and Training (JET) Program; and to
- adults aged 18–54 who are unemployed for 12 months or more under the NEWSTART strategy.

JOBTRAIN participants' needs, their suitability for training, and the skill requirements of the local labour market, are taken into account in the development of short-term vocational courses at the local level.

Courses are usually developed and/or provided on a fee-for-service basis through TAFE or other training providers.

Course participants may receive the Formal Training Allowance (FTA), equivalent to their unemployment benefit or job search allowance, plus ancillary allowances such as for books and equipment and living away from home allowances, with a training component of $30 per week for those 21 years and over.

Assistance with child care is available for sole parents (with children under 16 years) to undertake DEET-approved formal training to improve their job prospects.

In 1989–90 $2.1 million was spent providing overseas qualified professionals with the opportunity to gain Australian recognition of their qualifications. Through JOBTRAIN—Bridging Training for Overseas Qualified Professionals—short term programs are conducted to train selected candidates in various professions. To date the training has focussed on occupations such as doctors, dentists and nurses.

Employment Assistance

JOBSTART

JOBSTART is a wage subsidy program which provides access to employment for jobseekers who have experienced long periods of unemployment or face other disadvantages in obtaining work. Employers receive subsidy payments for a period of up to 20 weeks as an incentive for engaging and improving the employment prospects of these disadvantaged jobseekers. The rate of the subsidy payment varies according to age, length of unemployment and other special disadvantages.

The primary eligibility requirement is to have been unemployed for at least six months out of the last nine months, away from full-time education, be currently registered with the Commonwealth Employment Service (CES) and actively seeking work. This requirement is waived for especially disadvantaged labour market groups such as overseas-born jobseekers who have English language difficulties or face cultural barriers in gaining access to employment, Aboriginals, women returning to the workforce after a prolonged absence, young people deemed 'at risk', sole parents and other special needs jobseekers.

For employers to qualify for a JOBSTART subsidy they must be prepared to pay at least the award or appropriate wage for the job and fulfil other award conditions and should discuss the matter with the CES before employing the jobseeker.

Work Experience
Work Experience is being introduced in July 1991 to significantly enhance the employment prospects of long-term unemployed who have been in receipt of income support for over two years.

Work experience provides opportunities to reassess skills and aptitude in a 'real world situation' and demonstrate capacity to undertake a job.

Work experience will be made available on a limited basis through community organisations and local government on a regular weekly basis to a maximum of three days per week paid at the appropriate award wage.

Jobs, Education and Training—JET—Program for Sole Parents
JET aims to improve the financial circumstances of sole parents by facilitating their entry to the workforce through coordinated program assistance providing individual advice and access to employment, education, training and child care opportunities.

The JET program has two objectives:

- to increase the number and proportion of sole parents in employment; and
- to reduce social security outlays for sole parents.

JET is a voluntary program which provides sole parent pensioners with a consolidated range of assistance from the Department of Employment, Education and Training (DEET), the Department of Social Security (DSS) and the Department of Community Services and Health (DCSH).

JET was introduced in late March 1989 and is being phased in nationally over two years with full implementation by November 1990.

All sole parent pensioners are eligible for JET, however, priority is given to: those who have been on a pension for over 12 months, and whose children are over six years; those whose youngest child will reach the age of 16 within two years; and teenage sole parents.

JET Advisers in DSS offices provide sole parents with individual assessments of job barriers and prospects, advice about relevant services, and refer them to the Commonwealth Employment Service (CES) for employment, education and training assistance. Extra places are available for sole parents who need to retain or improve their work skills through the JOBTRAIN, JOBSTART or Job Search Training Programs. For JET clients undertaking full-time education courses, extra funds are available for income support under AUSTUDY. In addition, full-time student pensioners receive an AUSTUDY education supplement of $30 per week.

Child care places are provided to sole parents not able to obtain permanent child care, through the Children's Services Program (by DCSH) during their training and education, and for a short period after they commence employment.

Community Based Strategies

SkillShare—The Community and Youth Network For Employment and Training
The objective of the SkillShare program is to enable long-term and other most disadvantaged unemployed people to obtain and retain employment or to proceed to further

education or training. The program began on 1 January 1989 and provides skills training including personal support and referral and enterprise activities through community sponsor bodies with a demonstrated capacity to deliver such services.

Sponsor bodies comprise non-profit community organisations either pre-existing or established specifically for this purpose and local government authorities. They are funded to provide a program of activities including structured skills training and job search training for the target group in their area during a calendar year or three-year grant period.

The SkillShare target group is long-term unemployed people, particularly those unemployed for twelve months or more and other most disadvantaged unemployed people who:

- are likely to benefit from a community-based approach to labour market assistance; and
- do not have ready access to other employment, further education and training opportunities.

The other most disadvantaged unemployed people include:

- people with disabilities;
- young people who are at risk such as the homeless, wards of state, ex-offenders, those from single-parent families or those dependent on pensions or benefits or those who left school before the successful completion of Year 10;
- Aboriginals;
- migrants with English language difficulties and/or from culturally different backgrounds which inhibit their employment prospects;
- sole support parents including those in receipt of supporting parents benefits;
- offenders, ex-offenders and homeless people; and
- people who have lost or will lose eligibility for supporting parents benefit or widow's pension.

Sponsors provide regular reports on their activities and records of participants and these are currently being monitored as part of Departmental program participation monitoring.

From 1 January 1990, 371 SkillShare projects have assisted approximately 40,000 participants from the most disadvantaged unemployed; it is expected that almost 90,000 people will be assisted in 1990.

As a result of broader initiatives announced in the 1989–90 Budget, SkillShare Special Services Grants are also available to eligible community organisations in 1990 to provide labour market brokerage pilot services to people with disabilities and older unemployed and to deliver additional assistance to disadvantaged young people to enable them to participate successfully in mainstream training programs.

In 1990 eight pilot services for older unemployed people operated across all States and six pilot services for people with disabilities operated with one service in each State. By mid-1990 SkillShare Special Services Grants for Disadvantaged Young People had provided funds to 39 services under this four year program. These services are expected to assist approximately 2,300 young people in 1990.

New Enterprise Incentive Scheme—NEIS

NEIS provides assistance for unemployed people to set up self-employment ventures. The Scheme operates as a partnership between the Commonwealth Government and either State/Territory Governments or private sector and non-government organisations. It provides a comprehensive support package for participants during the crucial establishment phase, increasing their opportunity to establish themselves successfully in permanent self-employment.

The target group for NEIS is unemployed people registered with the Commonwealth Employment Service, in receipt of or dependent on unemployment benefit or certain other Social Security benefits or pensions, and aged between 18 years and the aged pension age. Proposed businesses must be new, independent, reputable and assessed as commercially viable and meeting an unsatisfied demand.

Innovative Rural Education and Training Program—IRETP

IRETP is part of the Commonwealth's 'Fair Go' strategy targeted at improving access of rural Australia to education and training. IRETP is designed to assist community groups, educational institutions and industry in the development of innovative methods for delivery of relevant education and training programs at the regional level in non-metropolitan areas of Australia.

Aboriginal Employment

The overall aims of the Aboriginal Employment Development Policy (AEDP) are to achieve equitable Aboriginal representation in employment and to contribute to the achievement of economic activity for Aboriginal communities by:

- increasing the level of permanent employment for Aboriginal people in the mainstream labour market; and
- actively generating employment through economic development within Aboriginal communities located in rural and remote areas.

DEET's responsibilities under the AEDP are collectively known as the: *Training for Aboriginals Program* (TAP), which aims to improve training and employment opportunities for Aboriginal people by:

— assisting private and public sector employers to develop recruitment and career development strategies for Aboriginal people in the mainstream labour market;
— negotiating with employers for training assistance linked with employment outcomes;
— recognising and supporting community-based employment and training, including training support to enterprises and community development projects; and
— providing assistance for vocational training in formal and short-term special courses.

Several elements of TAP are better known by the following specific titles:

- *Aboriginal Employment Action* (AEA) which encourages large employer corporations to develop recruitment strategies for increasing Aboriginal employment;
- *Aboriginal Enterprise Incentive Scheme* (AEIS) which provides assistance to unemployed Aboriginals to become self-employed in business; and
- *Enterprise Employment Assistance* (EEA) which provides wage subsidies to Aboriginal enterprises to create employment opportunities.

Labour Market Operations

Mobility Assistance Scheme

The Mobility Assistance Scheme aims to facilitate referral or placement of jobseekers by providing financial assistance towards the costs incurred in pursuing or taking up suitable employment opportunities. In 1989–90 the scheme had four components:

- *Fares Assistance.* Provides free travel on public transport for jobseekers to attend interviews for employment of a continuing nature. This ensures that those most in need of financial assistance are not disadvantaged in their search for employment by the cost of fares.
- *Relocation Assistance.* Provides financial assistance to meet the relocation expenses of jobseekers who are unable to obtain continuing employment in their present locality and are prepared to move to a new area to take up a job that cannot be filled by suitable local jobseekers. Assistance comprises contributions towards offsetting the various expenses associated with relocation.
- *Immediate Minor Assistance.* Provides for a one-off payment of up to $100 to jobseekers in necessitous circumstances to cover incidental costs associated with starting employment. Examples of such incidental costs are union dues, uniforms and initial fares.

- *Trainee Mobility Assistance.* Provides fares and accommodation assistance for disadvantaged jobseekers attending live-in vocational training courses away from home, primarily under JOBTRAIN.

In 1989–90 1,096 people were assisted under the Relocation component and $3.4 million was spent on the Mobility Assistance Scheme overall.

From 1 January 1991 two new elements are being introduced:

- *Support for Fares and Accommodation.* For short term job search activity in high employment areas by long term unemployed jobseekers who are prepared to move if they gain employment; and
- *Post Placement 'Travel-to-Work' Assistance.* Under certain circumstances for the long term unemployed in the early stages of employment.

Trainee Mobility Assistance will no longer be provided under this program, and is now funded directly against the labour market program under which the assistance is incurred, e.g. SkillShare, TAP and JOBTRAIN.

Industry Labour Adjustment Assistance
The program contributes to the efficient and equitable functioning of the labour market by improving and adapting the skills/employment base in particular industries or regions undergoing structural change and assisting individuals affected by the change.

This sub-program provides a range of labour market measures under the auspices of the Office of Labour Market Adjustment (OLMA). The measures cover varied forms of assistance directed to particular industries undergoing structural change in recognition of the need for enhanced competitiveness, and to workers losing employment as a result of structural adjustment or specific Commonwealth Government decisions. The assistance is available in specific packages or 'mixes' according to the assessed needs of the workers in the particular industry or region.

Packages which operate under the program can be divided into two main categories:

- industry packages usually in a national context to address major restructuring in an industry which results in significant labour shedding; and
- regional packages to address the impact of structural change on a specific geographic labour market.

Industry Packages
Situations indicating significant labour shedding across a number of enterprises in the one industry are investigated with a view to the design of innovative labour market measures to redress disadvantages of individuals resulting from shedding of labour in response to industry restructuring.

Industry Labour Adjustment Packages have the primary function of assisting retrenchees from the industry to gain re-employment and may, as a secondary focus, look at information gathering activities to assist the industry in its direction of restructuring activities.

Industry Packages to operate in 1990–91 are:

- *Textiles, Clothing and Footwear Industries Labour Adjustment Package (TCF LAP)*—re-employment, retraining and/or relocation assistance for workers retrenched during the restructuring anticipated under the 1989–95 TCF Industry Plan. Special Assistance is also available for women and those with a need for English Language Training.
- *North Queensland Rainforests Labour Adjustment Package (Rainforests LAP)*—re-employment, retraining and relocation assistance for timber industry workers retrenched as a result of the decision to nominate the Queensland Wet Tropical Rainforests for the World Heritage List. Other assistance funded through the Appropriation includes cash compensation payments to ameliorate immediate dislocation.

- *Passenger Motor Vehicles Package (PMV-LATA)*—previously provided under the Labour Adjustment Training Arrangements (LATA) to provide flexible vocational training and other assistance to employees retrenched from the Passenger Motor Vehicle Industry as a result of the Passenger Motor Vehicle Plan 1984–1992.
- *Christmas and Cocos (Keeling) Islands Adjustment Training Program*—a package of vocational training to assist local residents retrenched as a result of the closure of the single product enterprises on their respective Islands to gain access to emerging new employment opportunities on the Islands.
- *Coal Mining Industry Labour Adjustment Package (Coal LAP) and Heavy Engineering Adjustment and Development Program (HEADP)*—re-employment assistance for retrenchees from these two industries. While eligibility of access to the provisions of the programs ceased on 30 June 1990, those persons in training at that time will continue to be assisted until the completion of their training in 1990–91.

Regional Packages

Where the effect of several years of restructuring has resulted in chronic high levels of long-term unemployment, or where the need is assessed for improved regional coordination of industry and labour market planning in respect of a particular geographical area, then a regional labour adjustment package may prove appropriate.

Such packages provide retrenchment assistance similar to that of the Industry packages, but with the scope to include innovative measures such as small scale funding of coordination or information projects, as a catalyst to improved operation of the local labour market.

Packages to operate in 1990–91 are:

- NSW—Broken Hill and Illawarra;
- Vic.—Ballarat;
- SA—Eyre Peninsula;
- Qld—Wide Bay/Burnett;
- Tas.—A state wide regional package is in place; and
- Other packages are currently under consideration by the Minister for Higher Education and Employment Services. These include the Goodna/Inala and Sunshine Coast Regions in Queensland and Kalgoorlie (Gold Mining) in Western Australia.

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8

SOCIAL SECURITY AND WELFARE

Commonwealth Government Expenditure on Social Security Services

This section deals with various Commonwealth Government payments for the relief of the aged, disabled, widowed persons, sole parents, the orphaned, the unemployed and the sick, as well as assistance to families, etc. On 1 July 1947, with the passage of the *Social Services Consolidation Act 1947*, all Acts providing social service benefits were amalgamated. The Act is at present called the *Social Security Act 1947*.

The main social security payments provided by the Commonwealth Government under the Social Security Act, as at June 1990, and the date on which each came into operation, are shown below.

Age pension	1 July 1909
Invalid pension	15 December 1910
Family allowance	1 July 1941
Widow's pensions	30 June 1942
Funeral benefit	1 April 1943
Bereavement allowance	1 January 1990
Unemployment benefit	1 July 1945
Sickness benefit	1 July 1945
Special benefit	1 July 1945
Sheltered employment allowance	30 June 1967
Wife's pension (superseded wife's allowance)	5 October 1972
Double orphan's pension	26 September 1973
Rehabilitation allowance	1 March 1983
Mobility allowance	1 April 1983
Carer's pension (subsumed spouse carer's pension)	1 November 1985
Child disability allowance (superseded handicapped child's allowance)	15 November 1987
Family allowance supplement (superseded family income supplement)	17 December 1987
Job search allowance	1 January 1988
Sole parent's pension (superseded supporting parent's benefit and Class A widow's pension)	1 March 1989
Widowed person's allowance (Class C widow's pension extended to males)	1 March 1989

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 pension is payable to men and women who have reached the ages of 65 and 60 respectively. Age pension is generally subject to residence qualifications, an income test and an assets test.

Invalid pension is payable to persons aged over 16 years who are not of age pension age and who are at least 85 per cent permanently incapacitated for work, of which at least 50 per cent is directly caused by a physical or mental impairment of the person. It is also payable to persons who are permanently blind. Invalid pension is paid subject to residence qualifications, an income test and an assets test. Pensions paid to the permanently blind are not subject to income and asset tests.

Sheltered employment allowance is payable to disabled people who are employed in approved sheltered employment services and are otherwise qualified to receive an invalid pension or would become so qualified should they cease to be provided with sheltered employment. The allowance is subject to the same income and assets tests as apply to the invalid pension and is paid at the same rate. It is payable in the form of a supplement to the sheltered employee's wages.

Rehabilitation allowance is payable to people who receive assistance through the Commonwealth Rehabilitation Service, and who would otherwise be eligible to receive a social security payment. It is subject to the same income and assets tests as the invalid pension, and similar additional benefits are available.

A wife's pension is payable to the wife of an age or invalid pensioner when she is not entitled, in her own right, to an age or invalid pension or rehabilitation allowance. The spouse of a person receiving sheltered employment allowance (and in certain circumstances, a rehabilitation allowance) does not receive a wife's pension as such, but an equivalent payment is made. There is no residence qualification, but an income and assets test does apply.

A carer's pension is payable to a person providing constant care and attention for a severely disabled age or invalid pensioner living in the same house where the carer is not eligible for a pension in his or her own right.

Additional pension is payable, subject to the income test, for each dependent child under 16 years (at a higher rate for children aged 13–15) and dependent full-time students aged 16 to 24 years, who are not in receipt of a prescribed educational allowance (e.g. AUSTUDY). Widowed or other unmarried age or invalid pensioners with a dependent child may, in addition, receive mother's/guardian's allowance. Rent assistance, combined with the basic pension or benefit rate is assessed under the general pension or benefit income test. It is available to pensioners if they pay rent or pay for lodging, or board and lodging. All recipients of sheltered employment allowance and certain others receive a means-test free incentive allowance in lieu of rent assistance. Remote area allowance is payable to pensioners living in certain remote areas. Mobility allowance, which is means-test free, is payable to disabled people who are undertaking vocational training or gainful employment and who are unable to use public transport without substantial assistance because of their disability.

AGE PENSIONERS: 30 JUNE

Age	*1988*	*1989*	*1990*
60–64 years	163,525	166,007	167,252
65–69 years	301,362	308,684	314,390
70–74 years	312,339	295,879	286,600
75 years and over	551,588	563,740	572,226
Total	**1,328,814**	**1,334,310**	**1,340,468**
Number of wife's/carer's pensioners	25,290	26,188	27,791
		—$'000—	
Total payments during year*(a)*	6,972,771	7,516,110	8,182,453

INVALID PENSIONERS: 30 JUNE

Age	*1988*	*1989*	*1990*
16–19 years	7,809	7,863	7,808
20–39 years	60,980	62,274	63,874
40–59 years	158,196	161,244	164,261
60 years and over	69,928	76,414	80,770
Total	**296,913**	**307,795**	**316,713**
Number of wife's/carer's pensioners	91,973	94,321	95,839
		—$'000—	
Total payments during year*(a)*	2,188,388	2,415,564	2,679,752

(a) Includes allowances, rent assistance, and wives' pensions where applicable.

At 30 June 1990 112 sheltered employment services were paying the allowance to 9,846 disabled employees and 278 wives. Expenditure during the year 1989–90 was $78.0 million.

At 30 June 1990, there were 2,211 persons in receipt of rehabilitation allowances. Expenditure during the year 1989–90 was $18.7 million.

Sole parent's pension, widowed person's allowance and associated payments

Sole Parent's Pension

Sole parent's pension was introduced from 1 March 1989. It amalgamated the former Class 'A' widow's pension and supporting parent's benefit, the two income support payments for people bringing up a child or children without a partner. All persons who were receiving either payment at 1 March 1989 were transferred to sole parent's pension without any change to their eligibility.

Maximum rates are identical to those applying to age pension.

Sole parent's pension may be paid to a person who has a 'qualifying child'. This is a child under 16 years or a child attracting child disability allowance, and who is:

- a natural or adopted child; and
- in the person's legal custody; or has been in the person's care and control for 12 months and likely to remain so permanently or indefinitely.

Sole parent's pension may be paid to:

- a separated husband or wife, or a separated de facto husband or wife;
- a person whose legal or de facto spouse has been imprisoned (including remanded in custody) for at least 14 days;
- a widow or widower;
- a person whose de facto spouse has died;
- a divorced person;
- a person who is unable to live with the spouse or de facto spouse in the matrimonial home because of the spouse's or de facto spouse's long-term illness or infirmity; and
- an unmarried person.

Widowed Person's Allowance

Widowed person's allowance was introduced from 1 March 1989 and replaced Class 'C' widow's pension.

Widowed person's allowance provides short term assistance for recently bereaved widowed persons, both male and female. It allows a period of adjustment to make funeral arrangements, settle financial matters or to seek employment. The allowance may be granted to a person who, immediately before his or her spouse's death, was either legally married or living in a de facto relationship with that person.

There is no age restriction on the payment of widowed person's allowance but the allowance cannot be paid concurrently with another pension, benefit or allowance. Widowed persons with dependent children generally qualify for sole parent's pension immediately.

The allowance is payable for up to 12 weeks after the date of the spouse's death, although payment can be extended if a widow is pregnant at the time of her spouse's death. Otherwise, the allowance is paid under the same conditions as other pensions.

Class 'B' widow's pension

From July 1987, gradual phasing out of the Class 'B' widow's pension began. From that date, no new grants were made except to women who were in circumstances which would have made them eligible before that date.

It was payable to a widow who, because she had no qualifying children or students in her custody, care and control, was not eligible for a Class 'A' widow's pension, but was 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 a qualifying child or student.

In addition to the basic pension, a mother's/guardian's allowance and additional pension for each dependent child are payable. Rent assistance is also available if they pay rent or pay for board or lodging. Remote area allowance is payable if living in certain remote areas.

WIDOW PENSIONERS/WIDOWED PERSONS ALLOWANCE, BY TYPE AND AGE: 30 JUNE

	1988	*1989*	*1990*
Class 'B' widow pensioners aged—			
45–49 years	6,540	5,182	3,624
50–54 years	21,259	19,589	17,204
55–59 years	38,879	37,773	36,606
60 years and over	20,014	20,982	21,291
Widowed person's allowance	110	116	222
Total	**86,802**	**83,642**	**78,947**
		—$'000—	
Total payments during year*(a)*	505,116	535,200	553,743

(a) Includes payment to benevolent homes for maintenance of pensioners. It also includes rent assistance and allowances.

SOLE PARENT PENSIONERS, BY AGE AND TYPE: 30 JUNE

	1988	*1989*	*1990*
Age—			
Under 20 years	9,508	9,564	10,245
20–29 years	86,247	86,347	89,653
30–39 years	94,751	96,234	100,393
40–49 years	40,910	40,652	42,152
50–59 years	6,996	6,427	6,197
60 years and over	244	245	246
Type of pensioner—			
Females—			
Unmarried mothers	45,654	46,590	47,845
Widows	11,960	10,978	9,940
Divorcees	30,393	26,842	22,817
Separated wives	123,058	127,805	138,645
Separated de facto wives	17,662	17,074	18,334
Males—			
Widowers	837	793	805
Divorcees	1,126	1,020	953
Separated husbands	6,721	7,140	8,203
Separated de facto husbands	881	819	857
Other	364	408	487
Number of pensions	**238,656**	**239,469**	**248,886**
		—$'000—	
Total payments during year*(a)*	2,004,545	2,131,986	2,334,211

(a) Includes rent assistance and allowances.

Child Support Scheme

Stage 1 of the Child Support Scheme commenced in June 1988 with the establishment of the Child Support Agency (CSA) in the Australian Taxation Office. Under Stage 1 of the Scheme, maintenance orders and agreements made, registered or approved by the courts can be enforced by the CSA. The Agency collects child support from liable parents and these payments are distributed to custodial parents on a monthly basis by the Department of Social Security. The collection of child support is by automatic withholding of payments by employers in the case of PAYE tax payers and, in the case of self-employed people, by direct monthly payments to the CSA.

Stage 2 of the Scheme, which began on 1 October 1989, replaced the system of court ordered child maintenance. Instead, if parents cannot agree, the custodian can apply to the CSA which will administratively assess the amount of child support using a formula set out in legislation. Stage 2 is prospective in that it applies only to people who separate or have a child born on or after 1 October 1989.

Unemployment, sickness and special benefits and associated payments

Unemployment benefit is payable to persons over 18 and under age pension age, who are unemployed. Job search allowance is payable to unemployed persons aged 16 to 17 years to encourage the active search for jobs. Sickness benefit is payable to persons aged at least 16 years, but under age pension age, who are temporarily incapacitated for work. They must be an Australian resident. Both unemployment and sickness benefits are subject to an income test and an assets test. Job search allowance is subject to a parental income test, a personal income test and those in receipt of the independent rate of job search allowance are also subject to an assets test. A person cannot receive the benefits simultaneously, nor can a person receive a benefit at the same time as an invalid, widow's, service pension or sole parent's pension.

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. They must also be capable and willing to undertake suitable work, and be taking 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 totally incapacitated for work because of sickness or injury and that they have thereby suffered a loss of income.

A special benefit may be granted to persons not qualified for unemployment or sickness benefit who are not eligible for any pension, and who, because of age, physical or mental disability or domestic circumstances, or any other reason, are unable to earn a sufficient livelihood for themselves and their dependants. Recipients of special benefits include, among others, persons ineligible for a pension or benefit because of lack of residence qualifications and migrants in government accommodation centres awaiting their first employment in Australia. 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.

All beneficiaries with dependent children are eligible for an additional benefit for each dependent child except where the dependent child is in receipt of a prescribed educational allowance. In addition, sole parents are eligible for mother's/guardian's allowance. Rent assistance is also payable to beneficiaries who have at least one child under 16 years, and other beneficiaries after six continuous months on benefit provided they pay sufficient rent other than to a public housing authority if they are over 24 or married, or if they are aged 18–24 provided they live away from the parental home. A young homeless allowance is available to recipients of job search allowance, and to sickness and special beneficiaries under 18 years, who are homeless and without parental or custodial support. Job search allowance recipients who have established long term independence from their parents may also receive a higher independent rate.

UNEMPLOYMENT, SICKNESS AND SPECIAL BENEFITS: YEAR ENDED 30 JUNE

	1988	*1989*	*1990*
Unemployment beneficiaries (including job search allowees)*(a)*—			
Number of new benefits granted	728,438	689,981	*(b)*725,000
Number on benefit at end of year	475,070	390,001	427,931
Average number on benefit at end of each week during year	502,514	429,350	385,014
Sickness beneficiaries—			
Number of new benefits granted	108,772	110,369	*(b)*116,000
Number on benefit at end of year	75,060	78,818	79,341
Average number on benefit at end of each week during year	74,557	76,759	78,103
Special benefit beneficiaries—			
Number of new benefits granted	112,907	133,275	*(b)*170,000
Number on benefit at end of year	22,646	25,301	28,111
Average number on benefit at end of each week during year	21,598	23,929	26,463
		—$'000—	
Amount paid during year*(c)*—			
Unemployment and job search allowance*(a)*	3,374,879	3,135,640	3,067,796
Sickness	511,042	552,970	611,167
Special benefit	150,800	178,310	214,767

(a) Job Search Allowance began on 1 January 1988. *(b)* Estimated. *(c)* Includes additional allowances.

Fringe benefits

The Commonwealth Government makes several non-cash 'fringe benefits' available to pensioners and recipients of sickness benefits, and their dependants, who are entitled to a Pensioner Health Benefits (PHB) card or, in the case of sickness beneficiaries, a Health Benefits (HB) card. The issue of a PHB card is subject to a special income and assets test. The 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 services;
- postal redirection concessions; and
- free hearing aids services.

State and Territory 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 1,825,182 pensioners at 30 June 1990 with PHB cards entitling them to Commonwealth pensioner fringe benefits.

Unemployment and special beneficiaries, and other persons on low income, receive a Health Care card entitling them to a range of pharmaceuticals at a concessional rate. This concession is also available to pensioners whose income and assets exceed the qualifying limits for fringe benefits and who are provided with a Pharmaceutical Benefits Concession (PBC) card.

Family allowances

Family allowance is payable, subject to an income test, to a person with children under 16 years or dependent full-time students aged 16 to 24 years who are not in receipt of a pension, benefit or allowance in their own right or prescribed educational allowance. An additional allowance, also subject to an income test, is payable in respect of multiple (three or more) births until the children turn six years. Payment is usually made to the mother. Approved charitable, religious or government institutions are paid family allowance for children in their care.

Generally, to be granted an allowance the person and the child must be in Australia and be Australian citizens, or have been given permission to remain in Australia permanently.

FAMILY ALLOWANCES: 30 JUNE 1990

Number of children and students in family	*Number of families*						
	NSW/ACT(a)	*Vic.*	*Qld/NT*	*SA(b)*	*WA*	*Tas.*	*Aust.*
1	240,943	174,563	132,324	62,048	65,850	20,387	696,115
2	256,819	191,657	139,470	68,343	75,971	22,560	754,820
3	112,325	83,742	62,813	25,248	32,805	9,825	326,758
4	31,701	21,769	18,062	5,964	8,588	2,651	88,735
5	6,367	4,220	3,918	1,081	1,695	525	17,806
6	1,738	1,039	1,139	235	457	124	4,732
7	453	298	334	54	114	46	1,299
8	151	99	101	18	27	3	399
9	44	30	37	8	11	2	132
10 or more	16	17	24	1	4	1	63
Total families	**650,557**	**477,434**	**358,222**	**163,000**	**185,522**	**56,124**	**1,890,859**
No. of children in families	1,265,565	926,837	702,109	305,755	362,930	109,329	3,672,525
				—$'000—			
Amount paid during year	627,486	454,076	346,410	150,268	178,439	53,632	*(c)1,810,309*

(a) Excludes Broken Hill Regional Office. *(b)* Includes Broken Hill Regional Office. *(c)* Includes an amount of $1,000 recovered from overseas.

Family allowance supplement

Family allowance supplement is paid subject to income and assets tests to low-income families with one or more children eligible for family allowance so long as they are not in receipt of any Commonwealth pension, benefit or allowance which provides additional payment for dependent children, and so long as the children of these families are not receiving means-tested Commonwealth payments. Levels of payment are age-related and are linked to the rates of additional pension or benefit for children. Rent assistance is also available to recipients of family allowance supplement if they pay rent other than to a public housing authority. The number of families in receipt of family allowance supplement at 30 June 1990 was 178,247. The amount paid during the year 1989–90 was $513.3 million.

Child disability allowance

Child disability allowance may be paid to a parent or guardian of a child under 16 years or a dependent full-time student aged 16 to 24 years who has a physical, intellectual or psychiatric disability. The allowance is not payable if the student is receiving an invalid pension or sole parent's pension. The disabled child must be living in the family home and must need and receive substantially more daily care and attention over an extended period than needed by a child of the same age who does not have such a disability. The allowance is not subject to an income test, but a residence qualification similar to that for family allowance applies. The number of child disability allowances being paid at 30 June 1990 was 40,222. The total amount paid through these allowances during the year 1989–90 was $61.7 million.

Double orphan's pension

Double orphan's pension is payable free of means test to guardians of, or institutions caring for, children under 16 years, or dependent full-time students aged 16 to 24 years whose parents are both dead or one parent is dead and the other is missing, imprisoned or in an institution. The family allowance residence test applies. The pension may also be paid to persons caring for refugee children. The rate is indexed annually. Payments are made fortnightly with family allowance.

Mobility allowance

Mobility allowance is a payment, free of means test, for disabled people unable to use public transport without assistance who are employed or undertaking vocational training.

Bereavement allowance

From January 1990 eligible pensioners will receive bereavement allowances in respect of a deceased spouse equivalent to 14 weeks payment that would have been made to the spouse for that period. Allowances will be available in lump sum form to assist with funeral and associated expenses. The estate of a deceased single pensioner will be entitled to the next fortnightly instalment of pension following death. These arrangements supersede funeral benefit and special temporary allowance provisions.

Social security—portability and reciprocal agreements

Australian pensions, with the exception of widows' pensions for non-de jure widows, supporting parents' benefits and carers' pensions, can be transferred abroad once they have been granted. Since 1 July 1986, the rate of pension to be paid abroad is proportional to the period of Australian residence during a 25 year working life. The number of Australian pensions paid abroad under portability provisions at 30 June 1990 was 28,469.

Australia has comprehensive reciprocal social security agreements with the United Kingdom, New Zealand, Italy and Canada. Negotiations and discussions are proceeding with major migrant-source countries in order to establish a network of agreements. The purpose of the network is to protect the social security rights of people who divide their working lives between Australia and other countries.

Employment assistance schemes

In conjunction with the Departments of Employment, Education and Training, and Community Services and Health, the Department of Social Security administers the Jobs, Education and Training (JET) program. The JET program was introduced in March 1989, and provides an integrated program of assistance for sole parents in the form of individual counselling, and access to training, education, job search assistance and child care support. Participation in the program is voluntary.

The NEWSTART program was introduced in February 1989, and is a joint program administered by the Departments of Social Security and Employment, Education and Training. It is targeted at 18–54 year olds who have been in receipt of benefit for 12 months or more, and comprises intensive joint CES/DSS interviews involving personalised assessment, counselling and referral to labour market opportunities; improved information provision, additional labour market program assistance; an active job placement and community awareness strategy; and new transition-to-work incentives in the unemployment benefit system including an employment entry payment of $100, expansion of the work-test to allow participation in short courses and voluntary work while maintaining benefit entitlement and a waived waiting period for former clients reclaiming benefit within 13 weeks.

Other services of the Department of Social Security and the Department of Community Services and Health

The Department of Social Security provides a professional social work service and Migrant and Aboriginal Liaison Office schemes. The Department also provides funding to the Australian Institute of Family Studies and to the Social Policy Research Centre at the University of New South Wales. The Department of Community Services and Health provides Grants-in-Aid (general support grants) towards the infrastructure costs of national non-government organisations which represent consumers and interest groups in the community services sector. Grants totalling $1.459 million in 1988–89 were paid to organisations including the: Australian Council of Social Services, Australian Council on the Ageing, Australian Council for Rehabilitation of Disabled, Australian Early Childhood Association, Disabled People International (Australia), Australian Pensioners' and Superannuants' Federation.

Commonwealth Government Assistance Through Welfare Organisations

Supported Accommodation Assistance Program—SAAP

SAAP was introduced in all States and Territories from 1 January 1985 and brought together former programs such as the *Women's Emergency Services Program*, the *Youth Services Scheme* and the *Homeless Persons' Assistance Program*. SAAP provides recurrent funds for a range of supported accommodation and related support services and is jointly Commonwealth and State funded. SAAP provides financial assistance for the funding of non-government organisations and local government to provide crisis accommodation and support services for homeless persons.

Following a national review in 1987 a new SAAP Agreement was entered into between all States and Territories and the Commonwealth, effective from 1 July 1989. This new Agreement is incorporated into the Supported Accommodation Assistance Act 1989.

SAAP is administered on a day-to-day basis by State/Territory Governments in accordance with the SAAP Agreement. Capital funding for SAAP services is provided within the *Crisis Accommodation Program* (CAP) which comes under the provisions of the Commonwealth/State Housing Agreement. Unlike SAAP, CAP is totally Commonwealth funded.

The objectives of the new program are to provide transitional support accommodation and related support services for people who are homeless and/or in crisis to help them move towards independent living, where appropriate, or other alternatives (such as long term supported housing), as soon as possible.

The replacement program which commenced on 1 July 1989 focuses on five target groups: young people, women with or without children who are escaping domestic violence, families, single men and single women.

Other features of the new program include the importance placed on community consultation in the planning and development of priorities for each State, the focus on user rights and the focus on client outcomes.

The SAAP allocation for 1990–91 is $137 million (of which the Commonwealth will contribute $81 million). This represents a significant increase over 1989–90 expenditure of $102.2 million. In addition, growth funds of $5 million (to be matched dollar for dollar by the States) have been allocated by the Commonwealth up to 1991–92. This will have involved an injection of some $40 million over the first three years of the new Agreement. Maintenance of funding levels in real terms is also provided for on an annual basis through indexation.

Homeless Youth—a Commonwealth priority during 1989–90 to 1992–93

The Commonwealth has identified youth as a priority target for 1989–90. This is specifically in response to the problems identified in the report of the Human Rights Commission, 'Our Homeless Children'. The new initiatives to assist homeless young people include:

- a further $17 million to be made available over 4 years under SAAP ($34 million when matched by States) to underpin the expansion of accommodation services and to link homeless young people with other services; and
- an extra $10 million capital funding in 1989–90 which, together with further earmarked capital funding under the CSHA in the period 1990–91 to 1992–93, will double the medium and long term accommodation capacity.

Home and Community Care Program—HACC

HACC was established in 1985–86 and is jointly funded by the Commonwealth Government and the State and Territory Governments. HACC funds organisations and community groups which provide basic maintenance and support services for the frail aged and people with disabilities to enable them to remain living at home. Support is also provided to the carers of these people.

The Program aims to enhance the independence, security and quality of life of frail, aged and younger people with disabilities by avoiding their inappropriate admission to long-term residential care. It achieves this by facilitating and promoting the development of cost-effective community care alternatives which are appropriate and which can flexibly respond to individual needs.

Services funded under the Program include home help and personal care; home maintenance and modification; food services; community based respite care; transport services; community paramedical services; community nursing; assessment and referral; education and training for service providers and users; information and coordination.

Commonwealth expenditure under the matched Program totalled just under $222 million in 1989–90. At this stage the Commonwealth meets an average of 57 per cent of the total funding nationally. Over 3,000 projects are funded throughout Australia some providing a specific focus on the needs of younger people with disabilities, those with a non-English speaking background, Aboriginal and Torres Strait Islanders, those with dementia or the carers of the frail aged and younger people with disabilities.

In addition to the matched Program funds, the Commonwealth has made available $71 million over 4 years commencing 1987–88 to fund projects which test new approaches to providing services. Packages of home care services are put together for individuals which are appropriate to their particular needs. One hundred and twenty one projects were approved as at June 1990, covering all States and Territories. The Commonwealth and each State/Territory have or are in the process of jointly developing, in the context of a broad national approach, an evaluation strategy to evaluate the effectiveness of the various coordinating arrangements and to assess the economics of community care.

In March 1989, HACC Ministers endorsed the recommendations of the First Triennial Review of the HACC Program, completed in December 1988, and assigned a high priority to the implementation of a consumer rights strategy. Other review recommendations related to service standards, client assessment, training, planning and consultation. These recommendations are being implemented progressively.

In the area of consumer rights, HACC Ministers have approved a Statement of Rights and Responsibilities. In addition, the Commonwealth and States/Territories have agreed on a set of draft national service standards to form the basis of consultation with service providers and consumers. The standards are expected to be finalised and implemented early in 1991. The HACC National Guidelines were revised to include the recommendations of the First Triennial Review, and distributed to all service providers.

During 1988–89 the House of Representatives Standing Committee on Finance and Public Administration conducted an inquiry into the findings of the Auditor-General's Efficiency Audit of the HACC Program which took place during 1987–88. The Committee's report 'There's No Place Like Home', was tabled in November 1989 and concluded that the efficiency audit had established that the HACC Program is operating and achieving its main aim, that is, it is providing people with the opportunity to remain at home rather than move into residential care.

COMMONWEALTH EXPENDITURE ON HOME AND COMMUNITY CARE PROGRAM
($'000)

	1987–88	*1988–89*	*1989–90*
Matched payments to States, NT, and ACT	167,289	195,515	221,957
Unmatched funds provided	1,886	9,259	19,804
Planning and development	219	317	338
Total expenditure	**169,394**	**205,091**	**242,099**

Programs for families with children

The *Children's Service Program* (CSP) assists families with dependent children to participate more fully in the community through the provision of financial assistance to State/Territories and other service providers for quality child care and other children's and family services.

The main objective of the CSP is to support workforce participation by giving families with dependent children (especially low income and sole parents) access to a range of quality child care services which are affordable and efficiently managed. The needs of parents at home are also recognised and there are projects which specifically help disabled, Aboriginal and non-English speaking families.

Priority has been given to increasing the number of child care centres, family day care schemes, occasional care centres and outside school hours care services. Emphasis is also given to providing fee relief for lower income families to help them pay for child care.

The number of child care places funded by the Commonwealth has continued to grow rapidly. There will be 30,000 new places established between 1989–90 and 1991–92 as part of the National Child Care Strategy. The Government has promised to expand this Strategy with an additional 50,000 places to be provided by 1996, bringing the total to some 194,000 places funded by the Commonwealth. The expansion will be cost shared with State Governments for both capital and recurrent funding for most service types.

It is also estimated that an additional 28,000 new places will be created over the next five years in the commercial/employer sector as a result of extending fee relief to low and middle income families using these services. This will remove the disadvantage these families may have had compared to families with access to services currently funded under the CSP.

EXPENDITURE ON CHILDREN'S SERVICES PROGRAM
($'000)(a)

1982–83	*1983–84*	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*	*1989–90*
64,954	80,125	122,726	150,072	181,245	224,945	213,327	215,036

(a) Excluding Pre-school block grants (ceased 31/12/1985). Including Family Support Services Scheme and Family Support Program (transferred to States through general revenue grants, 1/7/1988).

Emergency relief grants

The *Emergency Relief Program* provides emergency financial assistance to persons in crisis. Through the Program, grants are made to over 700 agencies. These agencies distribute funds, usually in the form of cash assistance, purchase vouchers, or payments on behalf of clients to persons in crisis. The Commonwealth administers the Program which supplements the significant activities of both State Governments and community organisations in the provision of this type of assistance.

The Program aims to assist the most needy in the community including low income families and single parents. Agencies are selected keeping in mind the need to ensure equitable geographic access and access by Aboriginal people and people from a non-English speaking background to this form of assistance.

COMMONWEALTH EMERGENCY RELIEF APPROPRIATIONS
($'000)

Financial year	*Appropriation*
1983–84	5,000
1984–85	5,950
1985–86	6,000
1986–87	6,320
1987–88	6,720
1988–89	7,040
1989–90	7,195
1990–91	7,648

People with disabilities

Under Part II of the *Disability Services Act 1986,* the Commonwealth provides grants to States and eligible organisations (non-profit and local government bodies and tertiary institutions) towards the recurrent and capital costs of a range of eligible services. These services include accommodation support, advocacy, competitive employment training and placement, independent living training, information, print disability services, recreation, respite care, and supported employment.

For services to be eligible for funding they must cater predominantly for persons with a disability, whose disability results in their having a substantially reduced capacity for communication, learning or mobility. The disability must be attributable to an intellectual, psychiatric, sensory or physical impairment or a combination of such impairments, and be permanent or likely to be permanent.

The Disability Services Act requires organisations to report regularly on the extent to which they have achieved positive consumer outcomes for their clients. In addition, formal reviews of their services are scheduled every five years.

The funding for eligible services in 1989–90 amounted to $244.4 million. An estimated 35,000 people with disabilities receive services from funded organisations.

The Department of Community Services and Health administers the Commonwealth Rehabilitation Service (CRS) which provides social and vocational rehabilitation services for working age people with disabilities. The major criterion for acceptance into a rehabilitation program is the expectation of significant gain towards independent living or vocational goals.

Services are provided from and arranged through a national network of some 120 regional locations. Programs may include:

- employment, vocational, mobility and other independent living training and education courses;
- diagnostic and assessment services, occupational therapy, physiotherapy, speech therapy and counselling services;
- aids and appliances and home, vehicle and workplace modifications; and
- associated accommodation and training allowances.

In 1989–90, 19,573 people received rehabilitation assistance from the CRS. Expenditure on rehabilitation services in 1989–90 was $59.9 million. The number of clients participating in rehabilitation programs in 1989–90 represented an increase of 3,783 over the previous year's activity.

The major directions in the Commonwealth program to assist people with disabilities include:

- the development of a more coordinated approach between the Commonwealth and the States/Territories in the provision of services for people with a disability; and
- the transition of services to provide clients with greater opportunities for independence, economic and employment opportunities and integration into the general community.

Hearing Services Program

The Hearing Services program through the National Acoustic Laboratories (NAL) fits approximately 60 per cent of all hearing aids in Australia.

Eligible people include holders of Pensioner Health Benefits cards and their dependents, all persons under 21 years of age, Veterans' Affairs clients, referred clients of the Commonwealth Rehabilitation Service and certain compensation claimants. Services are delivered through a network of 44 NAL Hearing Centres across Australia, plus some 65 visiting centres in rural and remote areas.

The NAL Central Laboratory at Chatswood provides equipment and training and develops procedures to support the delivery of services through the Hearing Centres. It also conducts noise and audiological research, evaluates new devices and techniques, advises on measures to prevent hearing loss and reports on environmental and occupational noise problems.

Residential care for aged people

The aim of the Commonwealth Government's aged residential care program is to ensure that frail, aged people who are assessed as being unable to live at home have access to residential support and care services appropriate to their needs. Support is provided by the Commonwealth for two main types of residential care and assistance—nursing homes and hostels. Nursing homes provide services for people who need continuous professional nursing and personal care, while hostels provide a wide range of accommodation and personal care services for less dependent aged people.

Two key objectives of the aged residential care program are to provide a range of accommodation and care services to meet the assessed needs of aged people, and to promote the quality of life for residents receiving such care.

COMMONWEALTH EXPENDITURE ON NURSING HOMES AND HOSTELS 1989–90
($'000)

	NSW	*Vic.*	*Qld*	*WA*	*SA*	*Tas.*	*ACT*	*NT*	*Aust.*
Nursing homes for aged (recurrent)	551,184	371,263	193,200	113,042	147,664	39,165	4,324	9,731	1,429,574
Hostels (recurrent)	50,551	36,462	30,208	13,572	20,940	3,523	357	1,398	157,011
Nursing homes and hostels (capital)	33,970	19,219	43,922	6,906	10,457	7,145	2,219	1,577	125,415

APPROVED NURSING HOMES AND HOSTELS AND BEDS 1989–90

	NSW	*Vic.*	*Qld*	*WA*	*SA*	*Tas.*	*ACT*	*NT*	*Aust.*
Approved nursing homes and beds for aged—									
Nursing homes	496	412	200	111	160	47	6	6	1,438
Beds	28,578	16,259	11,847	6,030	7,109	2,096	521	175	72,615
Approved hostels and beds—									
Hostels	310	244	183	119	128	25	8	4	1,021
Beds	14,343	10,472	8,684	4,216	5,373	869	425	88	44,470

Planning mechanisms

In 1986 the Government accepted a recommendation that planning ratios be adopted as the basis for the allocation and distribution of new nursing home and hostel places. This planning base seeks to achieve a national average provision of 100 residential places per 1,000 persons aged 70 years and over in all States and Territories. The long term target is to achieve a composition of 40 nursing home and 60 hostel places per 1,000 people 70 years and over.

To enhance this strategy, improved arrangements have been established to control admissions to nursing homes, in order to ensure that only people for whom nursing home care is the most appropriate option, are admitted.

The allocation of new residential care services to regions and special needs groups is based on the advice of Aged Care Advisory Committees (ACACs) in each State. These Committees are charged with formulating advice on relative priority needs with the intention that residential places will be equitably distributed to areas of lowest existing provision.

Assessment services

The Government recognised the need for a more complete and effective assessment of the care needs of frail, elderly people. Policies were implemented to ensure that aged people receive appropriate advice and assistance when choosing services. In order to satisfy these requirements, funding was provided for the development of assessment services to assess the medical, psychological and social needs of aged people. A national network of assessment services is under development in cooperation with State and Territory Governments. At 30 June 1990, the Commonwealth was supporting 106 services based at community centres and hospitals around the country. It is estimated that approximately 95 per cent of the aged population have access to assessment services.

The assessment services assess people in their own homes, in hospitals or in extended care facilities. The aim of the assessment is to help aged people select the type of care which best meets their needs. Ultimately, the teams will assume full responsibility both for assessing all people seeking nursing home admission and for determining eligibility for hostel subsidy.

Quality of life and quality of care

The Commonwealth, as the provider of significant subsidies to nursing homes and hostels, has a responsibility to ensure that nursing home residents are receiving a quality of life and an appropriate standard of health care. This responsibility is supported by a program of visits to nursing homes by Standards Monitoring Teams from the Department of Community Services and Health. A similar program is proposed for hostels, beginning in January 1991.

These teams have been set up in each State and Territory to monitor the compliance with the outcome standards of nursing homes and the service they deliver for the residents. To date nearly all of the 1,258 non-government nursing homes have had an initial visit. In addition, many of the homes have received follow-up visits in which the nursing home's progress toward meeting the Commonwealth standards are further monitored.

Teams talk to residents, visitors and nursing home staff to learn how the nursing home meets the needs and wishes of its residents. To achieve the principal objective of ensuring satisfactory resident care, the monitoring teams adopt a constructive and educative approach when negotiating appropriate remedial action with nursing homes who fail to meet all the standards.

The Standards Monitoring Teams prepare a report which gives an assessment of each nursing home's compliance with the standards. Since 1 July 1990, reports have been published to extend their availability to parties who have an interest in the nursing home. The reports are available from the State Offices of the Department of Community Services and Health.

Publication of reports enables prospective residents and their relatives to make informed decisions about accommodation for aged people who need available nursing care. Before the report is published, the proprietor has the opportunity to make a submission to the Minister on the report. (The provisions for publishing reports will be extended to hostels with the introduction of monitoring hostels standards from 1 January 1991.)

The outcome standards are based on several objectives each of which has a number of subordinate standards. These objectives include the need for care, social independence, freedom of choice, a homelike environment, privacy and dignity, variety of experience and safety. Care managers have the flexibility to arrange services and resources available to the nursing home to achieve the outcomes for residents.

The standards for nursing homes and hostels were developed by the Commonwealth Government and the State and Territory Governments after consultation with people and groups involved in the nursing home and hostels industry.

The Hostel Standards Committee reported to the Minister for Aged, Family and Health Services at the end of 1989. The committee members included representatives from industry, consumer groups, unions and State and Territory authorities. The committee recommended new outcome standards for hostels to the Government for introduction in 1991.

The nursing home standards can be found in the publication 'Living In a Nursing Home' and those for the hostels in 'Keeping the Quality in Hostel Life', both available from the AGPS Bookshop.

In order to further ensure that the civil, human and legal rights of residents of nursing homes and hostels are promoted and protected, the Government is currently implementing a number of initiatives, based on the major recommendations of the report 'Residents' Rights in Nursing Homes and Hostels', by consultant Chris Ronalds. Two key initiatives are the development of a Charter of Residents' Rights and Responsibilities, and a formal Agreement between the residents and proprietors of nursing homes and hostels.

Equity of access to residential care

A key element of the needs-based planning mechanism noted above is to ensure equity of access to residential care for special needs groups in all geographic areas. In particular, steps have been taken to improve access by ethnic and Aboriginal communities. In addition, the Commonwealth utilises fee controls in nursing homes and enhanced capital grant payments to hostels to ensure that financial disadvantage does not restrict entry to supported accommodation.

Uniform national recurrent funding for nursing homes

The present funding arrangements for nursing homes have been introduced progressively since 1987. They comprise two modules:

- a Standard Aggregated Module (SAM), which will be fully phased in by 30 June 1991. It comprises an infrastructure component to cover costs such as food, administration, cleaning and return on investment; and
- a nursing and personal care module, known as the Care Aggregated Module (CAM), to cover the costs of nursing and personal care.

These funding arrangements complement the nursing home outcome standards. In effect, they provide for specified levels of service to residents at a pre-determined price. Service providers are expected to meet the outcome standards but are free to deploy their resources flexibly and efficiently.

A review of the CAM funding arrangements was commenced late in 1989. It is expected to be followed by a review of the SAM arrangements during the 1990–91 financial year.

Hostel funding

To facilitate the equitable redistribution of resources to alternative, less institutionalised forms of residential care, hostel resources have been substantially enhanced, through capital and recurrent funding.

The Commonwealth Government has committed substantial resources to the expansion of hostel services as an integral part of its residential aged care program. Since 1986, the Government has raised the level of subsidy available for residents of approved age care hostels. In particular, the Personal Care Subsidy (which currently stands at $19.05 per day) has increased by 144 per cent since 1986.

Major adjustments have also been made to the planning and funding mechanisms for hostels. Unnecessary restrictions on organisations' access to funds have been removed, and they have also been allowed greater flexibility to raise funds themselves via borrowings and entry contributions from people with the capacity to contribute to the cost of their own accommodation.

Increasing the capacity of organisations to raise funds has allowed the Commonwealth to target capital subsidies to financially disadvantaged people and other disadvantaged groups more comprehensively. For example, significantly increased subsidies have been made available to provide accommodation for financially disadvantaged members of the community. Indeed, the Commonwealth now pays a capital grant of up to $51,200 for each hostel place which is required to accommodate a financially disadvantaged person.

The subsidy for general places varies depending on the proportion of financially disadvantaged people being accommodated in each hostel—the higher the percentage of financially disadvantaged residents, the higher the general place rate subsidy. This approach acknowledges that the greater the proportion of financially disadvantaged residents in a specific hostel population, the lower the number of people able to make an adequate entry contribution.

Assistance for home-based care

While the residential care program focuses mainly on long-term residential care, there are provisions under the program for assistance to those aged and disabled people who wish to stay in the community. Short-term or respite care is available for these people. This not only allows carers of such people a break from their responsibilities, but also provides support for frail, aged people who are caring for themselves.

In addition, Domiciliary Nursing Care Benefit is available to assist people who choose to care, in their own homes, for chronically ill or infirm relatives who would otherwise be in nursing homes. Typically, these people are incapable of caring for themselves or being left unsupervised for any significant period, and would require admission to a nursing home if home-care were not available. The basic criteria for the payment of the benefit are that the person must be aged 16 or over, require a nursing home level of care and be, receiving adequate nursing home care. The benefit is payable at the rate of $42 per fortnight.

Rights of older people using services

The rights of consumers of services has become a central issue in the provision of Government services, including services to older people.

In 1989, the Commonwealth Government commenced the development of initiatives which aim to promote and protect the civil, human and legal rights of residents of nursing homes and hostels. The initiatives are based on the philosophy that a person's fundamental rights do not diminish in any way when they move into a nursing home or hostel.

The initiatives are being implemented over a four year period, in close consultation with consumer, industry and union groups.

The key initiatives, which are nearing finalisation, include:

- the development of a Charter of Residents' Rights and Responsibilities and a formal Agreement between residents and proprietors which clearly establish the rights and responsibilities of residents and proprietors and establish the basis on which care and accommodation are provided;
- the establishment of a Community Visitors Scheme which aims to improve the quality of life of residents of nursing homes who have limited family and social contact, and who may be at risk of isolation from the general community for social or cultural reasons or through disability. Community visitors will provide companionship to residents and assist them to initiate or continue contact with the community if they wish;
- a comprehensive information strategy to enhance the awareness of residents, potential residents and the community generally of the types of services available for older people and the rights and entitlements of residents;
- the upgrading of complaints units in each State Office of the Department of Community Services and Health to receive and follow up complaints from residents or their representatives. This upgrading process has now been completed; and
- the establishment of independent advocacy services in all States and Territories to provide information, advice and support to residents and to take up grievance issues on their behalf. Advocacy services have been established and are now operational in all States and Territories.

Aged Consumer Forums have been established in all States and Territories at a National level. The purpose of the State Forums is to advise the Minister on matters of concern to consumers including carers in the areas of residential care in the community, housing, pharmaceuticals and health promotion. The Forums also provide a view on whether existing Departmental strategies relating to aged consumers are appropriate, effective and sufficient.

The *National Aged Consumer Forum* will take a national perspective on matters of concern to aged consumers and will also provide feedback on the views of older people.

The program of residents' rights initiatives will be implemented gradually. Close consultation with providers, consumers and professional organisations and State Governments will take place on details of implementation of all initiatives.

Multi-purpose centres

The Government recognises that people living in many small communities in rural or remote areas do not have access locally to a range of services because the size of these communities will not sustain the viable operation of separate services. In line with its commitment to provide accessible health services to all Australians, the Government is providing grants for the development of a number of multi-purpose centres to be located in under-serviced rural areas.

These centres provide many health and welfare services such as acute hospital care, residential aged care, disability and home and community care services. The co-location of services enable the cost-effective use of staffing and infrastructure resources for the services.

Project officers of the Department of Community Services and Health work with local community groups and State Governments to develop proposals bringing together small ventures of two or more types of service to reduce the overhead costs for each service.

Aboriginal and Torres Strait Islander People

A referendum in May 1967 led to the repeal of section 127 of the Constitution enabling Aboriginal and Torres Strait Islander people to be counted in the census. The Constitution was also amended to give the Commonwealth Government concurrent legislative powers 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 cultures.

The Commonwealth Government has used four key Commonwealth bodies to work towards achieving these aims, namely the Department of Aboriginal Affairs (DAA), the Aboriginal Development Commission (ADC), Aboriginal Hostels Limited and the Australian Institute of Aboriginal Studies.

The Department of Aboriginal Affairs, which was established in 1972, was responsible for policy planning and coordinating Aboriginal and Torres Strait Islander affairs at the national level.

The ADC was established in 1980 by the Commonwealth Government to assist 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 receive training where necessary.

DAA and the ADC were abolished in March 1990 with the establishment of the new Aboriginal and Torres Strait Islander Commission (ATSIC).

Aboriginal Hostels Limited, established in 1973 as a company owned and funded by the Commonwealth Government, provides temporary hostel accommodation for Aboriginal and Islander people across Australia.

The Australian Institute of Aboriginal and Torres Strait Islander Studies was originally established by legislation in 1964 to promote Australian Aboriginal and Torres Strait Islander studies in the arts, education, languages, health, history, archaeology, sociology and anthropology. A new act to broaden its functions and make its governing council more representative of Aboriginal and Torres Strait Islander people was passed in 1989.

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, 1973–77) and the National Aboriginal Conference (NAC, 1977–1985). The new ATSIC will be governed by Aboriginal and Torres Strait Islander elected Regional Councils and a national Board of Commissioners which will be comprised of predominantly Aboriginal and Torres Strait Islander members.

Migrants

Intake

The number of migrants who have come to Australia since the end of World War II has passed the 4.8 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 nearly 17 million at the end of 1989. At this time about 22 per cent of Australia's population was born overseas. Post-war immigration peaked in 1970 with 185,300 settler arrivals, and declined thereafter to a low of 54,100 in 1975. In 1989 settler arrivals numbered 131,100.

Settlement services for migrants and refugees

The Department of Immigration, Local Government and Ethnic Affairs (DILGEA) provides services to facilitate the successful settlement of migrants and refugees and their integration into Australian society. Its responsibilities therefore interface with the broader responsibilities of the Advisory Council on Multicultural Affairs and with the Office of Multicultural Affairs (OMA) located within the Department of the Prime Minister and Cabinet.

As part of the Government's response to the report of the Committee to Advise on Australia's Immigration Policies (CAAIP) in December 1988, DILGEA is to concentrate its settlement programs on realising the full social and economic benefits of migration by assisting migrants to achieve early and effective participation in the social and economic life of Australia.

Accordingly, DILGEA is refocussing its settlement activities and targeting its programs to priority needs of the annual intake. DILGEA's strategic role in settlement emphasises planning and coordination and phasing out duplication with other agencies on the basis of their access and equity commitments.

DILGEA has responsibility for the provision of services which directly address the basic establishment needs of migrants. Services include provision of programs and services to improve language skills; provision of settlement-specific information and linking migrants to sources of information in the community; and, facilitating access to needed community services through planning and coordination, and, where necessary, provision of some services. As part of its planning and coordination role DILGEA is developing cooperative planning approaches to migrant's service needs with other Commonwealth Government departments, and with State and local Governments and key non-government service providers.

The Adult Migrant Education Program (AMEP) provides a wide range of language learning opportunities, and offers information about Australia. DILGEA is responsible for the level, while service delivery is provided in the main by Adult Migrant Education Services and some tertiary institutions in each State and Territory. In 1989–90 expenditure on AMEP was $73 million. Provisional data shows that about 70,000 participants undertook one or more AMEP courses in 1989–90.

DILGEA provides an interpreting and translation service to non-English-speaking migrants and refugees, and to people and services working with them. The Department also offers a translation service to Commonwealth departments and other bodies. In some cases, a fee may be charged for these services. At present, translation units are operating in Canberra, Melbourne and Sydney and a translation service is offered by Telephone Interpreter Service (TIS) centres in other capitals.

In 1973 TIS was established to help overcome language related communication problems by providing, via the telephone, a 24 hour interpreting, information and referral service. TIS interpreters, together with community contract interpreters, cover over 100 languages. Where necessary, and especially in emergency situations, arrangements may be made for the personal attendance of an interpreter. TIS currently operates through staffed centres in all State and Territory capitals and via a 008 link to these centres from the rest of Australia. During the year ended 30 June 1990, a total of 362,235 calls were received by TIS.

Following a review of the delivery arrangements for interpreting and translating services nationally, a national bureau of language services is to be established by the Commonwealth Government and the State Governments to rationalise existing services. Cost sharing agreements that have encouraged the establishment or extension of State interpreting and translation services in areas of prime State responsibility since 1979 are to be terminated over 4 years from July 1989. Commonwealth funds will be diverted to the new national service.

A National Accreditation Authority for Translators and Interpreters (NAATI) was established in 1977 to develop standards of competence for interpreting and translating in Australia and to test and accredit interpreting-translating practitioners and courses. In October 1984, NAATI became an independent incorporated body. NAATI is strongly supported and funded jointly by the Commonwealth Government, the State and Territory Governments.

Settlement information is provided to approved migrants overseas, by giving them a copy of *Living in Australia* in their own language. In 1989–90 47,000 booklets, in 11 languages, were distributed through 37 overseas posts. In Australia Bi-lingual information officers conduct information sessions. Information is also an important aspect of the work if Grant-in-aid organisations and Migrant Resource Centres which are funded by DILGEA, and of the Telephone Interpreter Service.

DILGEA's settlement staff in all States and Territories assist migrants as they settle into the community, through planning and management of Departmental settlement programs and referral to services in the community. DILGEA regional offices are located close to major areas of migrant settlement thus facilitating local settlement planning initiatives and access to settlement services. DILGEA staff are also working to assist mainstream agencies in making their services more accessible to migrants.

The settlement of refugees is an important element in the Commonwealth Government's overall migrant settlement program. A network of migrant centres and self-contained units provides on-arrival accommodation and settlement services for refugees. There are migrant centres and self-contained units in both Sydney and Melbourne and self-contained accommodation in Brisbane, Adelaide and Perth. This network can provide accommodation for around 1,500 persons at any time.

In addition to offering refugees on-arrival accommodation and settlement services, many settle directly into the community, in the care of families and other groups which have undertaken to provide support and assistance under the community Refugee Settlement Scheme. This Scheme settled over 3,800 refugees in 1989–90.

Departmental activities are complemented by the services provided by voluntary agencies with Commonwealth grant funding. In many respects these voluntary agencies are best placed to assist migrants in their initial years in Australia. The number of Grants-in-Aid to enable voluntary agencies to implement settlement programs was 245 as at 30 June 1990. The Settlement Planning Branch also administers the Migrant Access Projects Scheme (MAPS) which provides grants of up to $50,000 per annum for projects which range in scale from those which provide infrastructure support (e.g. personal computers) to others which aim to improve the design, planning and coordination of services with migrants' needs in mind.

Thirty Migrant Resource Centres have been established in areas of high migrant density. These 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 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. In the financial year 1989–90, 105,515 applications for Australian citizenship were received compared with 114,977 in 1988–89 and 74,686 in the 1987–88 financial year. Over two million new settlers have been granted Australian citizenship since 1949.

Veterans' Affairs

The Repatriation Commission was established under the *Repatriation Act 1920.* With the repeal of that Act on 22 May 1986, the Commission has continued in existence under the *Veterans' Entitlements Act 1986.* At present, the Commission consists of three full-time members. The functions of the Commission are set out in section 180 of the Veterans' Entitlements Act and include:

- granting pensions, allowances and other benefits in accordance with the provisions of the Act;
- establishing, operating and maintaining hospitals and other institutions for the treatment of eligible persons;
- arranging the provision of treatment and other services for eligible persons;
- advising the Minister and providing him with information on matters relating to the Act;
- performing other functions conferred on the Commission by the Act or other Acts; and
- administering the Act subject to the control of the Minister.

The Department of Veterans' Affairs provides the administrative machinery through which the Commission operates. The central office of the Department is in Canberra. There is a branch office in the capital city of each State which is under the control of the Deputy Commissioner. Regional offices are located in Newcastle, Wollongong, Canberra, Ballarat, Townsville and Darwin.

The principal functions of the Repatriation Commission cover:

- payment of disability and dependants' pensions, service pensions and allowances to eligible veterans and their dependants;
- provision of medical treatment for veterans for injuries and illnesses accepted as service-related;
- provision of medical treatment in certain circumstances for veterans who are suffering from injuries and illnesses whether service-related or not;
- provision of medical treatment for war/defence widows and certain dependants of deceased veterans;
- commemoration of eligible Australian veterans whose post-war deaths are related to their war service; and
- provision of a wide range of other benefits for eligible persons.

Repatriation benefits are provided under the Veterans' Entitlements Act in respect of service with the Australian Defence Forces in World War I, World War II, Korea and Malayan operations, Australian contingent of the British Commonwealth Far East Strategic Reserve, Vietnam and South East Asia conflict and for service in the Regular Defence Forces on or after 7 December 1972. Certain civilians may also be eligible for benefits, as are Australian members of certain designated peacekeeping, observing and monitoring forces who had peacekeeping service overseas. Under the *Papua New Guinea (Members of the Forces Benefits) Act 1957*, indigenous inhabitants of Papua New Guinea who served in the Australian Forces in World War II and members of the Royal Papuan Constabulary and New Guinea Police Force who served in that conflict are eligible for compensatory type benefits. Australian mariners of World War II are eligible for compensation benefits under the *Seamen's War Pensions and Allowances Act 1940* and for income support benefits (service pension) subject to the conditions laid down in the Veterans' Entitlements Act. Members of other Commonwealth countries' forces and other allied veterans are not eligible for compensatory-type benefits in respect of their service, unless they were domiciled in Australia immediately before their enlistment. They may, however, qualify for income support payments such as the service pension.

The Annual Report of the Repatriation Commission provides more detailed information on Repatriation allowances, benefits and services.

VETERANS' AFFAIRS (excl. DSHC): TOTAL EXPENDITURE
($'000)

Class	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*	*1989–90*
Pensions, allowances and other benefits	2,334,799	2,587,404	2,766,858	3,111,508	3,180,025	3,393,270
Medical treatment	612,238	681,172	778,111	511,986	526,932	575,053
Administration	116,934	111,805	107,330	135,588	144,072	151,334
Works and maintenance	46,687	49,728	66,425	56,861	70,659	55,425
Total expenditure	**3,110,658**	**3,430,109**	**3,718,724**	**3,815,943**	**3,921,688**	**4,175,082**

NOTE: Expenditure figures exclude all operating expenses for the Repatriation General Hospitals, and all expenditure associated with the Defence Services Homes Corporation, the Australian War Memorial and Office of Australia War Graves. Total expenditure by the Veterans' Affairs Portfolio in 1989–90 was $4,870,902,739

STAFF EMPLOYED–FULL TIME EQUIVALENT STAFF AS AT 30 JUNE 1990

1989–90 ASL	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*CO*	*Total*
Benefits	536	381	300	128	142	64	141	1,692
Health Program	257	294	145	95	75	34	111	1,011
Office of Australian War Graves	7	9	8	7	5	2	13	51
Corporate Services Program	200	180	111	74	69	39	341	1,014
Repatriation General Hospitals	2,742	2,010	1,433	1,014	1,098	320	—	8,617
Auxiliary Hospitals	302	161	94	—	—	—	—	557
Total	**4,044**	**3,035**	**2,091**	**1,318**	**1,389**	**459**	**606**	**12,942**

NOTE: 1. The above staffing figures include part-time staff converted to full-time equivalent staff. 2. The conversion of part-time staff to full-time staff is based on the number of hours worked. 3. The above staffing figures include inoperative staff (on leave in excess of 12 weeks) against each program. 4. The above staffing figures include the Secretary and Statutory Office Holders (e.g. Director War Graves). 5. Central Office outposted staff are recorded against the State in which they are working and within each program. 6. Locally engaged staff overseas (War Graves Program) are not included above. 7. The above staffing figures do not include the Australian War Memorial. 8. The Housing Assistance staffing figures are included in the Benefits figures.

Benefits program

The principal objective of the Benefits Program is to compensate veterans and their dependants for the effects of war or defence service. Benefits such as pensions and allowances are administered under two sub-programs, the Compensation Sub-program and the Income Support Sub-program, and housing related benefits under the Housing Assistance Sub-program (see Housing and Construction chapter in this Year Book).

Compensation Sub-program

The main benefits provided under this sub-program are the disability pension and the war/defence widow's pension.

The disability pension is a compensatory payment for incapacity due to eligible war, defence or peacekeeping service. It is paid at a general rate between 10 per cent and 100 per cent, depending on the degree of war-caused or defence-caused incapacity. Higher rates of pension (intermediate rate and special rate) are payable for those incapacitated to 70 per cent of the general rate where the war-caused or defence-caused incapacity alone affects their capacity for work. The intermediate rate is payable where the person is unable to work more than 20 hours a week and the special rate is payable where the person is unable to work more than eight hours a week.

As from 22 December 1988, the Government introduced an Extreme Disablement Adjustment, equal to 150 per cent of the general rate. This is payable to severely disabled veterans who are 65 years of age or over.

The war/defence widow's pension is payable to the widow of a veteran:

- whose death has been accepted as war-caused or defence-caused; or
- who was receiving or entitled to receive a special rate disability pension at the time of his death.

Orphan's pension is payable to the children of these veterans.

The following tables provide an analysis of the number of pensions in force, and veteran's class of pension.

DISABILITY PENSIONS FOR INCAPACITATED VETERANS: NUMBER IN FORCE, BY CLASS OF PENSION: 30 JUNE 1990

Class	*1914–18 War*	*1939–45 War(a)*	*Korea, Malaya and FESR*	*Special Overseas Service*	*Peace-time forces*	*Miscel-laneous*	*Total*
Special Rate (T & PI or equivalent)	146	18,462	694	821	422	11	20,556
Intermediate Rate	2	819	26	46	45	2	940
Extreme Disablement Adjustment	9	886	4	—	1	—	900
General Rate—from 10 per cent to 100 per cent assessed disability	546	113,562	3,765	8,618	12,566	93	139,150
Total	**703**	**133,729**	**4,489**	**9,485**	**13,034**	**106**	**161,546**

(a) Includes Interim Forces.

DISABILITY PENSIONS: NUMBER IN FORCE

Class	*30 June 1988*	*30 June 1989*	*30 June 1990*	*Variation per cent*
Veterans	166,830	163,660	161,546	–1.3
Wives and wife widows	112,532	108,755	104,109	–4.3
Children	12,933	11,223	10,171	–9.4
War widows	73,255	74,743	76,471	+2.3
Orphans	797	717	633	–11.7
Other dependants	1,333	1,247	1,152	–7.6
Total	**367,680**	**360,345**	**354,082**	**–1.7**

The following table shows the number of pensions in force and the expenditure for disability pensions in each of the years ended 30 June 1984 to 1990.

DISABILITY AND WAR WIDOWS PENSIONS

Year	Number of disability pensions in force at 30 June — Incapacitated veterans	Dependants of incapacitated veterans	Dependants of deceased veterans	Total	Annual expenditure(a) ($'000)
1983–84	166,062	183,105	58,110	407,277	722,660
1984–85	165,377	179,420	63,524	408,321	837,230
1985–86	169,109	170,589	70,044	409,742	950,040
1986–87	169,257	132,971	72,884	375,112	991,744
1987–88	166,830	125,821	75,029	367,680	1,091,764
1988–89	163,660	120,325	76,360	360,345	1,123,624
1989–90	161,546	114,625	77,911	354,082	1,219,647

(a) Includes associated allowances.

A number of specific need allowances are available to veterans for their war-caused or defence-caused incapacity. They include attendant allowance, specific disability (section 27) allowance, clothing allowance, recreation transport allowance, vehicle assistance scheme benefits, temporary incapacity allowance and loss of earnings allowance. Decoration allowance is also available. Various payments intended to assist with funeral and other bereavement expenses are also available.

SPECIFIC NEED ALLOWANCES

Benefit	No. of recipients at 30 June— 1988	1989	1990
Attendant allowance	977	964	1,017
Section 27 (items 1–6)	61	61	64
Section 27 (items 7–15)	1,244	1,230	1,244
Clothing allowance	2,486	2,398	2,323
Recreation transport allowance	3,160	3,171	3,211
Decoration allowance	1,314	1,317	1,321
Vehicle assistance scheme	74	51	95

The *Veterans' Children Education Scheme* provides assistance with education and training for the children of special rate disability pensioners and certain other incapacitated veterans and deceased veterans whose death has been accepted as war-caused or defence-caused or who were receiving special rate disability pension or a section 27 allowance (items 1–6) at the time of death.

VETERANS' CHILDREN EDUCATION SCHEME, EXPENDITURE ($'000)

Cost of education of beneficiaries	NSW(a)	Vic.	Qld	SA(b)	WA	Tas.	Aust.
1985–86	1,344.8	929.5	731.1	303.1	270.4	162.7	3,741.6
1986–87	1,674.0	1,093.0	951.4	324.1	367.0	221.3	4,630.8
1987–88	1,754.0	1,233.1	1,166.0	387.6	349.2	267.2	5,157.1
1988–89	1,568.9	1,017.6	1,061.4	333.8	359.3	259.2	4,600.4
1989–90	1,492.2	975.3	971.6	293.6	361.9	268.8	4,363.4

(a) Includes ACT. (b) Includes NT.

VETERANS' CHILDREN EDUCATION SCHEME: NUMBER RECEIVING BENEFITS AT 30 JUNE 1990

Type of training	*NSW(a)*	*Vic.*	*Qld*	*SA(b)*	*WA*	*Tas.*	*Total*
At school—							
Primary*(c)*	115	91	117	30	85	37	475
Secondary	354	190	315	86	149	100	1,194
Total at school	*469*	*281*	*432*	*116*	*234*	*137*	*1,669*
Tertiary professional	154	115	75	37	20	20	421
Technical	20	39	18	—	17	3	97
Total	**643**	**435**	**525**	**153**	**271**	**160**	**2,187**

(a) Includes ACT. *(b)* Includes NT. *(c)* Not in receipt of an education allowance.

Income-support sub-program

The main benefit paid under this sub-program is the service pension. This is an income and asset tested pension similar to the age and invalid pensions payable by the Department of Social Security. The pension is payable to veterans with qualifying service at age 60 (males) or 55 (females). Veterans with qualifying service may be paid the pension at any age if they are permanently incapacitated for work. Qualifying service generally means service in an area and at a time when danger from hostile enemy forces was incurred by the veteran.

Veterans of other Commonwealth and allied countries may also qualify for the service pension for service in wars or war-like conflicts in which Australia has engaged. Veterans of Commonwealth forces must have served outside the country of enlistment or be entitled to the award of a campaign medal for service within that country. Allied veterans must have served in formally raised forces. The veteran must be an Australian resident with at least ten years residency. Service pension is also available to Australians, other Commonwealth and allied mariners of World War II.

Service pensioners who satisfy a separate income and assets test may be eligible for 'fringe benefits', provided by the Commonwealth Government, which include medical and hospital treatment, pharmaceutical benefits and telephone rental concessions.

A number of supplementary benefits are also available under the sub-program. These include:

- rent assistance;
- additional pension in respect of dependent children;
- remote locality allowance;
- carer's pension;
- guardian allowance; and
- bereavement payment.

The following table gives an analysis of the total number of pensions in force, as at 30 June 1990.

SERVICE PENSIONS: NUMBER IN FORCE, 30 JUNE 1990

Class	*1914–18 War*	*1939–45 War*	*Korea, Malaya and FESR*	*Special Overseas Service*	*British Common-wealth*	*Allied Forces*	*Miscel-laneous*	*Total*
Veterans—								
Old age	1,053	178,232	2,598	491	26,558	4,035	2,285	215,252
Permanently incapacitated	—	2,778	1,865	1,658	749	173	188	7,411
Tuberculosis*(a)*	2	482	8	1	8	—	—	501
Total	*1,055*	*181,492*	*4,471*	*2,150*	*27,315*	*4,208*	*2,473*	*223,164*
Wives and widows	750	131,856	3,011	1,502	20,980	3,321	1,764	163,184
Total	**1,805**	**313,348**	**7,482**	**3,652**	**48,295**	**7,529**	**4,237**	**386,348**

(a) Eligibility on these grounds ceased on 2 November 1978.

The following table provides a summary of Service Pensions in force.

SERVICE PENSIONS

	Pensions in force as at 30 June 1990			
	Veterans	*Wives and widows*	*Total*	*Annual expenditure(a) ($'000)*
1982–83	200,492	140,656	341,148	1,057,950
1983–84	218,660	156,845	375,505	1,294,279
1984–85	227,705	164,794	392,499	1,477,874
1985–86	233,751	169,801	403,552	1,616,987
1986–87	234,209	170,585	404,794	1,745,888
1987–88	232,711	170,153	402,864	2,011,205
1988–89	229,097	167,342	396,439	2,048,138
1989–90	223,164	163,184	386,348	2,164,449

(a) Includes associated allowances.

Treatment for Veterans and Dependants of Veterans

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 in Australia is provided for most non-service-related disabilities for: incapacitated veterans receiving disability pensions at or above the maximum (100 per cent) general rate; World War II 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 World War I; veterans of the Boer War; veterans who were detained by the enemy; war widows and certain other dependants of deceased male veterans whose deaths have been accepted as service related, and of deceased Special Rate pensioners; certain service pensioners; and returned servicewomen of World War II.

Special emphasis is given to caring for the aged, aimed at limiting the dependence of veterans and war widows on nursing home care and encouraging the alternative of home care.

In 1985 the Department established a Joint Ventures Scheme to assist veterans' organisations to help veterans and their dependants live at home for as long as possible. So far, the Department has helped to establish over 350 projects at a cost of about $2.5 million.

Treatment is provided at six Repatriation General Hospitals (RGHs—one in each State); three Repatriation Auxiliary Hospitals (NSW, Vic. and Qld); Anzac Hostel in Victoria;

Repatriation Artificial Limb and Appliance Centres (RALACs) and the Vietnam Veterans' Counselling Service (VVCS).

In addition to the Repatriation facilities, and subject to certain criteria, entitled persons are treated in State and private metropolitan and country hospitals and nursing homes at Departmental expense. During 1989–90 the occupied bed day figure for entitled persons in public hospitals was 415,240 and for private hospitals 284,112.

Under arrangements with State Governments, entitled persons requiring custodial, psychiatric care for a service related disability are treated at departmental expense in State psychiatric hospitals.

General medical practitioner services are provided through the Local Medical Officer Scheme (LMO). There were 16,018 Repatriation LMOs in the scheme as at 1 August 1990. During 1989–90 LMO consultations totalled 3,161,889.

Entitled persons may also be provided with dental treatment through the Local Dental Officer (LDO) Scheme which comprised 5,735 LDOs as at 1 August 1990. The services of approximately 600 dental prosthetists were also available to eligible beneficiaries. During 1989–90 495,720 dental services were undertaken.

Optometrical services, including the provision of spectacles; the services of allied health professionals and a comprehensive range of aids and appliances may be provided to entitled persons.

In addition, entitled persons may be provided with pharmaceuticals and dressings through the Repatriation Pharmaceutical Benefits Scheme.

Repatriation General Hospitals—RGHs

The Repatriation General Hospitals (RGHs) are teaching hospitals providing short term treatment during an acute episode of illness. They also provide outpatient services and assessment of need for domiciliary and other community support facilities through Aged and Extended Care Departments (AECDs). During 1989–90 there were 972,000 outpatient occasions of service at the RGHs.

In 1989–90 the RGHs met the needs of some 44 per cent of the entitled population for acute care hospitalisation. The RGHs contribute to State health care services by treating members of the general community where capacity exists after the needs of entitled persons have been met. Limits on the level of available beds for community patients are determined by the Repatriation Commission.

The following table gives details of in-patients (including community patients) treated at RGHs. The figures shown refer to treatment episodes, e.g. a person who is admitted to hospital twice during a year is counted twice.

RGHs—IN-PATIENTS TREATED 1989–90

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*Aust.*
Admissions	25,528	21,022	13,742	9,562	10,757	3,289	83,900
Separations	25,413	21,025	13,795	9,559	10,801	3,309	83,902
Total in-patients	26,002	21,395	14,124	9,791	11,046	3,366	85,724
Daily average occupied beds	557.6	409.6	373.3	232.2	263.4	68.5	1,905

Repatriation Auxiliary Hospitals—RAHs

The Repatriation Auxiliary Hospitals (RAHs) provide slow stream rehabilitation of patients; maintenance care of patients awaiting nursing home admissions and respite care for a limited number of patients. Community patients are admitted to spare capacity in some RAHs subject to maximum limits determined by the Repatriation Commission.

The following table gives details of in-patients (including community patients) treated at RAHs. The figures shown refer to treatment episodes, e.g. a person who is admitted to hospital twice during a year is counted twice.

RAHs—IN-PATIENTS TREATED 1989–90

	NSW	*Vic.*	*Qld*	*Total*
Admissions	1,913	857	459	3,229
Separations	1,804	853	459	3,116
Daily average occupied beds	154	82	58	294

ANZAC Hostel

Anzac Hostel provides minimal nursing supervision in a residential setting to eligible persons. The daily average occupied beds figure for 1989–90 was 28.

The Repatriation Artificial Limb and Appliance Centres—RALACs and the Free Limbs Scheme—FLS

During 1989–90 the Department of Veterans' Affairs provided artificial limbs free of charge to entitled veterans through the Repatriation Artificial Limb and Appliance Centres (RALACs). In addition, the Department administered the Government's Free Limbs Scheme (FLS) which provided artificial limbs free of charge to eligible Australian residents. Since 1973 22,500 people have received artificial limbs under the scheme. Limbs can be provided through RALACs or directly by private enterprise or State facilities.

RALACs are located in each State capital with sub-centres in Darwin, Townsville, Canberra, Newcastle and Albury. A mobile workshop operates in Victoria to provide services to remote locations. The Central Development Unit is located in Melbourne, and engages in research, development and evaluation in prosthetics and orthotics.

The following table gives details of production by all centres and commercial firms as a result of orders placed by the Department.

RALACs—PRODUCTION, 1989–90
(Numbers)(a)

	Entitled Veterans	*Community patients*	*Total*
Artificial arms	16	124	140
Artificial legs	459	1,871	2,330
Appliances	761	342	1,103
Artificial limb repairs	1,396	6,748	8,144
Appliance repairs	804	130	934
Footwear*(b)*	5,459	366	5,825
Footwear repairs	10,754	817	11,571

(a) Figures do not include limbs (175 arms, 2,492 legs) and limb repairs (8,518) provided by commercial firms as a result of orders placed by the Department. *(b)* Does not include adaptive footwear (1,172 pairs).

Free Limb Scheme Production by RALACs and Commercial Firms 1989–90

Total artificial limbs for FLS clients was 4,662.

Vietnam Veterans Counselling Service

The Vietnam Veterans Counselling Service (VVCS) has centres in Canberra, Harris Park (Sydney), South Melbourne, Brisbane, Townsville, Adelaide, Perth, Hobart and Darwin. An outposted centre has been established in Launceston with one planned for Albury/Wodonga. The service is intended to provide counselling to veterans and their families, as well as working with the ex-service community to promote acceptance of veterans, particularly Vietnam veterans, by the community.

The service is staffed by psychologists and social workers with detailed knowledge and experience about Vietnam service and its impact on veterans and their families, especially the impact of post-traumatic stress.

A Country Outreach Program was introduced in 1988 to extend the VVCS service to rural areas and access to counselling has been improved through provision of a 008 toll free telephone service. In NSW and Tasmania a 24 hour Veterans' Line telephone counselling service operates to assist veterans and their families who are in crisis.

The following table shows the increase in usage of the service over the last 3 financial years.

VIETNAM VETERANS COUNSELLING SERVICE, INCREASE IN USAGE 1987–88 TO 1989–90

	1987–89	*1988–89*	*1989–90*
Numbers of counselling sessions	24,022	26,633	29,464
Including:			
face to face	13,253	14,048	16,057
telephone (including 008)	8,798	10,152	10,818
group	201	296	2,240

The Office of Australian War Graves

The Office of Australian War Graves has two main functions. Its major area of responsibility by sheer volume of work is the implementation of government policy for the perpetual commemoration of eligible Australian veterans whose post-war deaths are related to their war service. The authority for this program was established by a War Cabinet Decision on 10 March 1922 and re-confirmed in several subsequent decisions.

It also maintains on behalf of the Commonwealth War Graves Commission, War Cemeteries and other commemorations in Australia, Papua New Guinea, Solomon Islands (Guadalcanal) and Norfolk Island. This responsibility is covered by a formal agreement between Australia and the Commonwealth War Graves Commission which was signed on 1 January 1975. Under a separate arrangement with the Commonwealth War Graves Commission the Office of Australian War Graves also maintains the Ambon War Cemetery in Indonesia.

The *War Graves Act 1980*, dated 23 May, created the statutory position of Director of War Graves. The Director is responsible under the Secretary of the Department of Veterans' Affairs for administering all matters associated with the Office of Australian War Graves' commemorative functions.

The Office maintains 19,520 war graves in 76 War cemeteries and 900 civil cemeteries. It also maintains 166,000 post-war commemorations scattered throughout 1,500 civil cemeteries. In 1989–90 it commemorated 10,000 veterans who died of war-related causes.

The Office provides an information service to those wishing to visit any of the 75,000 Australian war dead buried in some 70 countries overseas.

It holds records relating to the Commonwealth dead of World War II, the Australian dead of World War I and of the post World War II conflicts.

Full details of the operations of the Office of Australian War Graves are contained in its Annual Report.

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 month 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 per cent 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. Further expenditure surveys were conducted in 1975–76, 1984 and 1988–89. After the 1974–75 survey, geographical coverage was extended beyond the six State capital cities and Canberra to include urban and rural areas in all States and Territories except remote and sparsely settled areas.

The 1988–89 Household Expenditure Survey was the fourth major survey of its kind undertaken by the Australian Bureau of Statistics. It was conducted continuously over the twelve month period July 1988 to June 1989. Household expenditure surveys are designed to find out how the expenditure patterns of private households vary according to income level and other characteristics such as household size, composition, location and principal source of income. Information gathered from household expenditure surveys is primarily for use in reviewing the weighting pattern of the Consumer Price Index (CPI) which is used universally as a measure of change in the cost of living.

Preliminary information from the 1988–89 Survey was released in September 1989.

Summary of findings from the 1988–89 Survey

In 1988–89, average weekly household expenditure on commodities and services in Australia was $502.71. Household expenditure varied considerably across the States and Territories with the highest weekly expenditure being recorded in the two Territories at $587.13 for households in the Australian Capital Territory and $529.19 in the Northern Territory. Households in Tasmania had the lowest average weekly expenditure at $424.92. These differences in household expenditure reflect to some extent the differences in average weekly household income across the States and Territories. Households in the Australian Capital Territory and the Northern Territory had the highest average weekly incomes at $811.85 and $733.65 respectively. Households in Tasmania had the lowest average weekly household income at $541.32. These differences in household income are in turn related to such characteristics as the proportion of household income derived from earnings or government cash benefits, the average number of employed persons per household and the average age of the household head.

At the national level, average weekly household expenditure (*see* figure below) on *food* and *non-alcoholic beverages* ($95.83 or 19.1 per cent of total expenditure on commodities and services), on *transport* ($76.13 or 15.1 per cent) and on *current housing costs (for selected dwellings)* ($71.80 or 14.3 per cent) accounts for 48.5 per cent of total expenditure. Much less significant is the expenditure on *personal care* ($9.95 or 2.0 per cent) and on tobacco ($6.89 or 1.4 per cent).

HOUSEHOLD EXPENDITURE AND CHARACTERISTICS BY STATES AND TERRITORIES, JULY 1988 TO JUNE 1989

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT(a)*	*ACT*	*Aust.*
AVERAGE WEEKLY HOUSEHOLD EXPENDITURE ($)*(b)*									
Broad expenditure group*(c)*									
Commodity or service									
Current housing costs (selected dwelling)	79.10	72.17	64.98	62.75	65.26	53.79	86.30	100.16	71.80
Fuel and power	11.86	15.00	11.02	13.04	13.18	13.95	13.17	15.26	12.87
Food and non-alcoholic beverages	98.53	101.65	86.81	85.27	97.04	88.44	101.01	106.57	95.83
Alcoholic beverages	16.82	16.12	18.02	15.67	18.56	12.67	30.48	18.80	16.90
Tobacco	6.96	7.09	6.31	6.66	7.18	7.28	9.26	6.61	6.89
Clothing and footwear	33.10	33.22	26.76	25.88	29.31	23.94	24.34	33.50	30.73
Household furnishings and equipment	39.79	41.55	29.70	28.74	42.53	31.20	30.43	34.86	37.37
Household services and operation	24.88	25.35	22.22	20.65	24.48	20.83	32.71	28.16	24.11
Medical care and health expenses	23.12	22.84	19.44	20.28	20.10	18.26	16.21	21.91	21.68
Transport	78.05	79.14	69.98	69.63	79.56	66.10	74.98	89.57	76.13
Recreation	62.93	65.83	46.77	54.13	57.07	48.95	66.37	74.49	59.37
Personal care	10.59	10.08	8.32	9.55	10.97	9.27	9.34	9.92	9.95
Miscellaneous commodities and services	37.06	44.30	33.75	35.88	46.81	30.24	34.60	47.33	39.08
Total commodities or service expenditure	**522.80**	**534.36**	**444.08**	**448.13**	**512.05**	**424.92**	**529.19**	**587.13**	**502.71**
Selected other payments									
Income tax	136.04	138.64	104.85	100.51	126.09	97.91	152.46	187.14	127.02
Mortgage payment—principal (selected dwelling)	7.67	6.14	6.93	5.40	8.57	5.92	7.81	10.33	7.01
Other capital housing costs	36.12	12.30	4.07	17.65	21.48	2.24	9.59	15.94	19.91
Superannuation and life insurance	15.84	18.16	15.59	15.15	17.87	17.84	24.71	30.78	16.86
HOUSEHOLD CHARACTERISTICS									
Average weekly household income ($)(d)	*651.95*	*681.43*	*568.90*	*557.80*	*646.74*	*541.32*	*733.65*	*811.85*	*636.05*
Proportion (%) of total income being—									
Wages and salaries	72.3	73.2	70.1	72.8	70.4	68.8	81.1	83.8	72.3
Own business	8.8	10.1	8.6	6.0	12.5	8.8	9.0	5.3	9.2
Government pensions and benefits	10.1	8.3	12.3	12.5	10.1	13.4	6.4	4.6	10.1
Other	8.8	8.4	9.0	8.7	7.0	9.0	3.5	6.3	8.5
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Average age of reference person	*48*	*47*	*47*	*48*	*45*	*48*	*41*	*42*	*47*
Average number of persons in the household—									
Under 18 years	0.84	0.81	0.80	0.66	0.96	0.79	0.92	0.94	0.82
18 to 64 years	*1.68*	*1.75*	*1.62*	*1.60*	*1.75*	*1.65*	*1.71*	*1.86*	*1.69*
65 years and over	0.29	0.26	0.28	0.31	0.22	0.29	0.08	0.11	0.27
Total	*2.81*	*2.82*	*2.70*	*2.57*	*2.93*	*2.73*	*2.71*	*2.91*	*2.78*

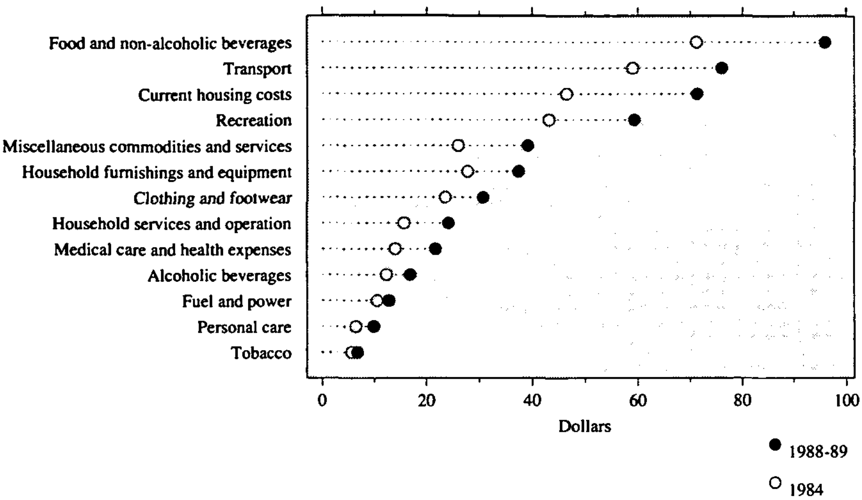
For footnotes *see* end of table.

HOUSEHOLD EXPENDITURE AND CHARACTERISTICS BY STATES AND TERRITORIES, JULY 1988 TO JUNE 1989—*continued*

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT(a)*	*ACT*	*Aust.*
	HOUSEHOLD CHARACTERISTICS—*continued*								
Proportion (%) of households with nature of housing occupancy being—									
Owned outright	42.7	46.1	44.5	42.1	36.3	45.8	15.7	15.9	42.8
Being bought	27.4	32.2	26.5	31.2	34.5	32.3	30.1	48.3	29.9
Renting—government	6.2	4.1	3.4	11.0	10.1	8.0	24.9	17.7	6.3
Renting—private	20.7	15.4	22.6	14.2	16.1	11.3	26.0	17.1	18.4
Occupied rent free	3.0	2.2	3.0	1.5	3.0	2.6	3.3	1.0	2.6
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Average number of earners in household	*1.2*	*1.4*	*1.2*	*1.2*	*1.3*	*1.2*	*1.4*	*1.5*	*1.3*
Proportion (%) of households with family composition of the household being—									
Married couple:									
only	22.6	21.7	24.1	28.6	21.1	29.4	15.6	21.2	23.2
with dependent children only	29.6	28.2	27.8	23.0	30.1	26.6	32.6	35.5	28.4
other*(e)*	12.6	15.7	10.3	12.9	15.0	12.2	6.9	8.2	13.1
Single parent one family household only	6.0	5.3	4.9	6.4	7.1	6.2	9.4	6.0	5.8
Single person household	19.7	20.5	22.8	22.1	16.5	18.1	23.8	16.1	20.3
Other*(f)*	9.5	8.6	10.1	7.0	10.2	7.5	11.7	13.0	9.2
Total	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
					—'000—				
Estimated number of households being in—									
Capital cities	1,158.8	986.4	421.2	368.2	365.7	64.8	22.2	83.0	3,470.3
Other urban areas	537.5	297.4	393.4	93.6	96.7	63.3	10.2	0.0	1,492.1
Rural areas	141.0	108.9	113.3	34.8	29.4	26.8	3.6	0.2	458.0
Number of households in sample	1,832	1,332	1,106	815	772	711	414	423	7,405
					—'000—				
Estimated total number in population—									
Households	1,837.4	1,392.7	927.8	496.5	491.8	154.9	36.0	83.3	5,420.4
Persons	5,154.2	3,927.8	2,509.2	1,278.3	1,440.9	422.8	97.4	242.2	15,072.8

(a) Darwin and environs and Alice Springs only. *(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)* Details of the component expenditure items which comprise broad expenditure groups are given in Appendix B of the 1988-89 *HES Information paper* (6527.0). *(d)* Household income is the sum of the gross weekly income of all household members. *(e)* Includes married couple family households where a combination of dependent and non-dependent children are present. *(f)* Includes married couple and single parent families living in multiple family households.

AVERAGE WEEKLY HOUSEHOLD EXPENDITURE ON COMMODITIES AND SERVICES, AUSTRALIA, 1984 AND 1988-89



Distribution of Income

The effects of government benefits and taxes on household income

All households in Australia pay taxes to government, whether directly in the form of income tax or indirectly through taxes on goods and services purchased. Similarly, all households in Australia receive benefits from government, whether directly in the form of regular cash payments such as age pensions or indirectly in the form of a range of services which are provided to households either without charge or at less than their full cost to government. Using data from the 1984 Household Expenditure Survey, supplemented by data from other sources, the ABS undertook a study of the effects of government benefits and taxes on the distribution of income of households in 1984.

The methodological approach employed in this study is based on that used in similar studies conducted by the United Kingdom Central Statistical Office. The most that can be claimed for the approach is that it provides a useful framework within which a large body of information which is relevant to the assessment of the redistributive effects of transactions between households and governments can be drawn together. It is important to recognise that the estimates of the effects of government benefits and taxes on household income depend on the particular assumptions which have been made.

In the study, some major components of government outlays and revenues which affect households were allocated to the households which received the benefits or paid the taxes. The incidence of government benefits and taxes and their effects on average household income were then examined for various household groups.

To illustrate the effects of government benefits and taxes on household income, a series of income measures was calculated. The starting point of the analysis was *private income*: the total current weekly income of all members of the household before the deduction of taxes and excluding any government benefits. Private income includes income from employment, self-employment, investments and other non-government sources. Next, government direct benefits to persons, such as pensions and unemployment benefits, were added to private income to obtain *gross income*. Direct taxes were then deducted to obtain *disposable income*. Government indirect benefits for housing, education, health and social security and welfare were then added to give *disposable income plus indirect benefits*. Finally, indirect taxes paid were deducted to produce *final income*.

Information on this study can be found in *The Effects of Government Benefits and Taxes on Household Income* (6537.0).

A similar study will be conducted using the 1988–89 Household Expenditure Survey and a publication of this study is expected to be completed in 1991.

Income Distribution Surveys

Surveys of income have been conducted by the ABS at irregular intervals. In the last such survey, conducted in the period September to December 1986, income was collected both on a last financial year basis, that is in respect of 1985–86, 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 gross 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. Preliminary and detailed final results of the survey were published in 1987, 1988 and 1989. The respective publications released are titled: *1986 Income Distribution Survey, Australia: Preliminary Results* (6545.0), *Persons with Earned Income* (6546.0) and *Income Units* (6523.0). Details of concepts, definitions, etc. employed in the survey and observations on the quality and reliability of the data can be found in these publications.

ALL INCOME UNITS: DECILE CLASSES, TYPE OF INCOME UNIT, GROSS INCOME SHARE AND MEAN GROSS WEEKLY INCOME, AUSTRALIA, SEPTEMBER–DECEMBER, 1986

	Married couple income units									
	With no dependent children		*With dependent children*		*One parent income units*		*One person income units*		*All income units*	
Decile class(a)	*Income share (per cent)*	*Mean weekly income ($)*	*Income share (per cent)*	*Mean weekly income ($)*	*Income share (per cent)*	*Mean weekly income ($)*	*Income share (per cent)*	*Mean weekly income ($)*	*Income share (per cent)*	*Mean weekly income ($)*
Lowest	3.0	136	2.5	156	2.5	71	2.8	69	1.9	77
2nd	3.3	180	4.8	294	6.0	141	3.5	101	2.9	120
3rd	4.2	207	6.2	378	6.0	154	4.3	110	4.3	174
4th	5.1	252	7.1	446	7.1	165	5.1	137	5.4	225
5th	6.8	339	8.5	513	7.1	179	7.3	191	7.2	293
6th	9.1	440	9.4	578	8.0	202	9.5	251	8.7	362
7th	11.4	559	10.8	656	10.1	244	11.7	306	10.9	442
8th	13.9	682	12.4	760	12.0	314	13.5	361	13.5	550
9th	17.0	834	14.8	907	15.6	385	16.3	437	17.2	706
Highest	26.2	1,288	23.5	1,447	25.6	646	26.0	678	28.0	1,150
Total	**100.0**	**491**	**100.0**	**614**	**100.0**	**251**	**100.0**	**264**	**100.0**	**410**
Median gross weekly income ($)	389		543		186		210		328	
Mean gross weekly income ($)	491		614		251		264		410	
Number ('000)	1,785.2		1,968.6		315.1		3,392.2		7,464.1	

(a) Ten per cent groupings of the estimated population when income recipients or income units are ranked in ascending order according to each income recipient's or income unit's total gross income.

FULL-YEAR, FULL-TIME WORKERS(a): MEAN GROSS ANNUAL EARNED INCOME BY EDUCATIONAL ATTAINMENT BY AGE BY SEX, AUSTRALIA, 1985–86

	Males	*Females*	*Persons*	*Males*	*Females*	*Persons*
		—'000—		—Mean gross annual earned income ($)—		
With post-school qualifications—						
Degree	371.0	151.7	522.7	32,850	25,040	30,580
Certificate (non-trade)/ diploma	417.5	376.2	793.7	27,580	18,980	23,500
Trade certificate	986.1	42.4	1,028.5	22,070	16,830	21,850
Other	65.2	33.2	98.4	21,970	17,310	20,400
Total	*1,839.8*	*603.5*	*2,443.3*	*25,490*	*20,260*	*24,200*
Without post-school qualifications—						
Left school at age—						
18 or over	185.3	55.0	240.3	21,610	16,580	20,460
17	272.3	125.8	398.1	20,220	16,150	18,940
16	357.2	173.9	531.1	20,220	15,570	18,700
15 or 14	674.0	275.5	949.5	19,270	14,690	17,940
13 or under	140.9	35.3	176.3	18,890	13,260	17,760
Total	*1,629.7*	*665.5*	*2,295.3*	*19,870*	*15,270*	*18,540*
Total(*b*)	**3,471.5**	**1,271.3**	**4,742.8**	**22,850**	**17,640**	**21,450**

(*a*) Excludes 119,200 full-year, full-time workers whose earned income was zero. (*b*) May include a small number of persons who never attended school.

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9

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 administered by the Commonwealth Government. The Government appoints two Ministers to the Portfolio of Community Services and Health. The Minister for Community Services and Health exercises overall responsibility over the Commonwealth Department of Community Services and Health, represents the portfolio in Cabinet and has particular responsibility for Budget matters and major policy decisions. The Minister for Housing and Aged Care has responsibility for the development and administration of particular health matters, including the Pharmaceutical Benefits Scheme and Therapeutic Goods. 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 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.

Medicare

Details of the health financing arrangements under the Medicare program introduced by the Commonwealth Government in February 1984 are available in *Year Book* No. 68.

Since the introduction of the Medicare Program the income thresholds on which the levy is payable have been revised. From 1 July 1990 no levy is payable by single people earning less than $11,745 per annum or by sole parents and married couples with combined income of less than $19,045 per annum, with a further $2,100 per annum allowed for each dependent child.

'Shading-in' arrangements apply in respect of persons with taxable incomes marginally above the threshold.

The levy was increased from one per cent to 1.25 per cent of taxable income on 1 December 1986.

Medicare benefits

The Health Insurance Act provides for a Medicare Benefits Schedule which lists medical services and the Schedule fee applicable 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. Up to 1985 Schedule fees were set and updated by independent fee tribunals appointed by the Government and in which the Australian Medical Association (AMA) participated; the Government has determined the increase in Schedule fees since 1986. Medical services in Australia are generally delivered by either private medical practitioners on a fee-for-service basis, or medical practitioners employed in hospitals and community health centres. The Schedule is constantly being reviewed through ongoing consultation with the medical profession and it is updated twice yearly to reflect current medical practice.

Medicare benefits are payable at the rate of 85 per cent of the Schedule fee for services, except those to hospital in-patients with a maximum payment by the patient of $20 ($26, from 1 January 1991) for each service where the Schedule fee is charged. Where a doctor charges above the Schedule fee, the patient is responsible for any amount in excess of the Schedule fee in addition to the 15 per cent/$20 ($26) 'patient gap'.

For medical services rendered in hospitals or day-hospital facilities to private in-patients, the level of Medicare benefit is 75 per cent of the Schedule fee for each item with no maximum patient gap. The private health insurance funds cover the remaining 25 per cent (i.e. up to the level of the Schedule fee) for insured patients.

Gap benefits are not payable for out-of-hospital medical services. However, where accumulated gap payments for these services exceed $150 ($240 from 1 January 1991) in a year, further services attract Medicare benefits equal to 100 per cent of the Schedule fee.

Under Medicare, medical practitioners may choose to bill the Commonwealth directly rather than billing the patient. In so doing, they accept the Medicare benefit as full payment.

Fee-for-service rebates are paid at differential rates if a medical practitioner has been recognised by the Minister for Community Services and Health as a Specialist or Consultant Physician (or Psychiatrist) and the patient has been referred by another practitioner. Similar arrangements apply to general practitioners who are vocationally registered.

Revised arrangements were introduced on 1 August 1987 for the payment of Medicare benefits for pathology services. These arrangements included the Commonwealth Pathology Accreditation Scheme which was introduced to ensure quality of pathology services throughout Australia. The Principles of Accreditation incorporated the standards recognised by the National Pathology Accreditation Advisory Council.

Currently, Australia has reciprocal health care agreements with the United Kingdom, New Zealand, Italy, Sweden and Malta whereby Australian visitors to those countries, and from those countries to Australia, are entitled to access the host country's public health system for immediately necessary medical and hospital treatment.

In 1989–90 claims associated with 145 million services were processed by the Health Insurance Commission involving benefit payments of $3,805 million. Summary statistics on benefits paid for medical services are provided below.

MEDICARE BENEFITS: NUMBER OF SERVICES, BENEFITS PAID, PERCENTAGE OF SERVICES DIRECT BILLED AND SCHEDULE FEE OBSERVANCE, STATES AND TERRITORIES, 1989–90

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	O'seas	Aust.
					—'000—					
Number of services	56,405	34,651	24,647	11,710	11,642	3,503	826.0	1,981	32.0	145,398
					—$ million—					
Benefits paid	1,478.5	911.0	639.2	314.1	299.3	89.5	20.2	52.7	0.7	3,805.4
					—per cent—					
Direct billed	64.1	52.1	59.8	53.7	56.8	46.5	63.1	42.5	68.0	58.4
Schedule Fee Observance(a)	76.3	68	72.8	70.4	68.8	65.9	71.1	50.8	n.a.	72.0

(a) Services direct billed and patient billed at or below the Schedule fee.

MEDICARE BENEFITS: AMOUNT PAID BY BROAD SERVICE TYPE, STATES AND TERRITORIES, 1989–90 ($ million)

Type of service	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	O'seas	Aust.
GP attendances	575.0	358.1	250.2	127.3	116.2	37.4	7.7	20.3	0.3	1,492.5
Specialist attendances	224.7	150.4	86.9	52.7	38.6	12.6	2.0	8.2	0.1	576.2
Obstetrics	17.8	13.7	6.9	3.6	4.8	1.4	0.4	1.0	0.0	49.7
Anaesthetics	32.3	25.2	14.7	8.4	7.7	2.5	0.5	1.2	0.0	92.5
Pathology	222.2	118.8	106.5	37.8	45.3	12.6	4.3	7.3	0.1	555.1
Radiology	143.7	83.0	57.9	28.5	31.6	7.8	2.0	4.5	0.1	359.0
Operations	137.7	91.0	70.1	33.0	29.6	8.7	1.9	4.9	0.1	376.9
Assistance at Operations	4.7	4.1	3.5	2.1	0.6	0.2	0.1	0.2	0.0	15.5
Optometry	32.0	20.4	13.8	6.4	7.0	2.5	0.7	1.3	0.0	84.2
Cleft Lip and Palate	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.5
Miscellaneous	88.3	46.2	28.6	14.0	17.9	3.7	0.8	3.8	0.0	203.3
Total	**1 ,478.5**	**911.0**	**639.2**	**314.1**	**299.3**	**89.5**	**20.2**	**52.7**	**0.7**	**3, 805.4**

Hospital care

From 1 February 1984, basic public hospital services have been provided free of charge. Under Medicare, in-patient accommodation and care in a shared ward by a doctor employed by a hospital are provided free of charge, together with a range of casualty and out-patient services. 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 hospital insurance with registered health benefits organisations to cover these situations and Medicare benefits are available for private medical practitioners' charges in respect of those medical services provided in hospital.

Patients who are accommodated in either private or public hospitals for continuous periods in excess of 35 days and who have not been certified as acute care patients, are in essence nursing home-type patients and are required to make a statutory non-insurable patient contribution in the same way that a patient in a nursing home does. For a private nursing home-type patient in a public hospital, fees are reduced and hospital benefits paid by registered health benefits organisations are decreased accordingly. These patients are also required to make the patient contribution. In a private hospital, the benefits are reduced to $100 a day, less the amount of the patient contribution. Any charges by private hospitals in excess of available benefits plus the statutory patient contribution become the responsibility of the patient.

Where a patient's doctor considers that a patient has continuing need of acute care, the doctor may issue a certificate under section 3 of the Health Insurance Act to that effect, and the nursing home-type patient arrangements do not apply. The arrangements also 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

During the period 1 February 1984 to 30 September 1986, the Commonwealth subsidised patients in private hospitals by making bed-day payments. Three levels of bed-day payments were made. These were aligned to the particular category of hospital in which the patient was treated. Health insurance benefits were similarly aligned.

Commencing 1 March 1987, and extended from 1 October 1987, a system of patient classification for payment of basic health fund benefits was applied. Under this system, five classes of hospital patients were identified. These were: advanced surgical, surgical/obstetric, psychiatric, rehabilitation and other 'medical' patients. Differential levels of basic health fund benefits are payable according to each patient's classification, and step-down periods (i.e. lengths of stay in hospitals) also apply for each classification.

The States have always had primary responsibility for the planning and provision of health services and facilities within their respective boundaries. However, associated with private hospital categorisation, the Commonwealth also had a responsibility, in consultation with the States, for the approval and categorisation of private hospital facilities. Because of this overlap of responsibilities, the Commonwealth decided to discontinue its regulatory controls in the private hospital sector from 1 October 1986, leaving the States with the sole authority over such matters. Also, in the context of budgetary considerations, Commonwealth subsidisation of the private hospital sector through bed-day subsidies ceased from 1 October 1986.

Acting on the recommendations of a joint industry working party, comprised of representatives of the private hospital and health insurance industries and the Australian Medical Association, the Commonwealth approved a system of classifying patients in private hospitals for health insurance benefits purposes. The patient classification system was introduced on 1 March 1987 and replaced the private hospital categorisation arrangements. Patient classification more appropriately relates basic health insurance benefits more directly to the actual costs of providing hospital services necessary to the treatment of patients' conditions.

From 1 March 1987, three classes of private hospital patients were declared for health insurance benefits purposes. These are: advanced surgical, surgical/obstetric and 'other' patients. Differential levels of benefits are payable in relation to a patient's classification and step-down periods also apply to each classification. Advanced surgical patients, and surgical/obstetric patients, are defined according to specified medical procedures as contained in the Medicare Benefits Schedule. From 1 October 1987, the patient classification arrangements were expanded to accommodate higher, distinct basic benefits for psychiatric and rehabilitation patients.

Pharmaceutical Benefits Scheme

The Pharmaceutical Benefits Scheme, established under the provisions of the National Health Act, provides a comprehensive range of drugs and medicinal preparations which may be prescribed by medical practitioners for persons receiving medical treatment in Australia. In addition, there is a limited range of antibiotic, antibacterial, analgesic and antifungal preparations which may be prescribed by dental practitioners for the treatment of patients. The drugs and medicines are supplied by an approved pharmacist upon presentation of a prescription from the patient's medical or dental practitioner.

During 1989–90 patient contribution arrangements were as follows:

- *free of charge*—the holders of a Pensioner Health Benefits Card, Health Benefits Card, Dependant Treatment Entitlement Card or Service Pension Benefits Card and their dependants receive benefit items free of charge;
- *$2.50 per benefit item*—people in special need who hold a Health Care Card 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 $2.50 per benefit item; and
- *$11 per benefit item*—all other people pay a contribution of $11 per benefit item.

The scheme also provided protection for the chronically ill high drug user by placing a ceiling on the amount which could be paid by an individual or family for pharmaceutical benefits in a calendar year. Under the new arrangements, a person or family group who used more than 25 pharmaceutical benefit prescriptions after the start of a calendar year qualifies for an entitlement to free pharmaceutical benefits for the remainder of the year.

Under the Pharmaceutical Benefits Scheme the total cost, including patient contribution of prescriptions processed for payment, was $1,311.3 million in 1989–90. This figure does not include the cost of drugs supplied through special arrangements, such as the Royal Flying Doctor Service (RFDS), Colostomy and Ileostomy Associations, methadone maintenance programs and hormone treatment programs.

BENEFIT PRESCRIPTIONS AND COST OF MORE FREQUENTLY PRESCRIBED DRUG GROUPS, AUSTRALIA, 1989–90

	Prescriptions		*Total cost of prescriptions(a)*	
Drug group	*Number*	*Percentage*	*Amount*	*Percentage*
	'000	%	$'000	%
Non-steroidal anti-inflammatory drugs	9,036	8.6	98,840	7.5
Anti-asthmatics and anti-bronchitics	9,252	8.8	119,828	9.1
Benzodiazepines, sedatives and hypnotics	7,213	6.9	32,658	2.5
Penicillins	6,195	5.9	75,333	5.7
Diuretics	4,266	4.1	41,881	3.2
Beta-blockers	4,491	4.3	51,345	3.9
Anti-hypertensives	5,765	5.5	170,614	13.1
Anti-anginals	4,117	3.9	73,383	5.6
Oral contraceptives	3,476	3.3	39,742	3.0
Antidepressants	3,332	3.2	21,341	1.6
Water, salts and electrolytes	2,841	2.7	19,896	1.5
Non-narcotic analgesics	3,501	3.3	18,351	1.4
Topical corticosteroids	2,449	2.3	13,954	1.1
Antacids	2,099	2.0	15,125	1.2
Tetracyclines	2,182	2.1	19,116	1.5
Sulphonamides and urinary antiseptics	1,430	1.4	16,153	1.2
Anti-emetics	1,861	1.8	9,827	0.8
Narcotic analgesics	1,940	1.9	12,064	0.9
Eye anti-irritants and anti-allergics	1,517	1.5	9,590	0.7
Other eye preparations	1,438	1.4	14,271	1.1
Gastric and Duodenal Ulcers	1,415	1.4	58,723	4.5
Topical Antifungals	1,320	1.3	8,121	0.6
Vaccines	1,288	1.2	20,378	1.6
Other Anti-diabetics	1,051	1.0	13,244	1.0
Systemic Corticosteroids	1,031	1.0	9,177	0.7
Other drug groups	20,462	19.5	328,380	25.0
Total	**104,969**	**100.0**	**1,311,332**	**100.0**

(a) Includes patients' contributions. Excludes Government expenditure on miscellaneous items.
Source: Commonwealth Department of Community Services and Health.

Commonwealth Government Subsidies and Grants to States

Hospital funding grants

New State and Territory funding arrangements were introduced on 1 July 1988. The former Identified Health Grants and Medicare Compensation Grants were terminated on 30 June 1988.

The new Hospital Funding Grants, totalling $3,370 million to the States and Territories in 1989–90, provided $3,304 million for hospital and related services, $39 million for incentives in the areas of post-acute and palliative care and day surgery procedures, $23 million towards hospital care for AIDS patients and $4.6 million to enable the development of a case mix based system as a management information system and potentially as a prospective payment system.

Hospital Funding Grants will operate in the first instance for the five year period 1988–89 to 1992–93 and be indexed each year to take account of population growth and adjusted for age and sex-weighted changes as well as price changes. The AIDS component is also indexed to take account of any increase in the number of AIDS patients.

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 or part thereof, incurred by those organisations in providing approved health services or an approved health service development project. 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.

Organisations currently approved included a number of State controlled pathology services and two hour vision clinics. Health Program Grants are also paid to approved radiation oncology services in lieu of receiving a capital reimbursement through the fee-for-service arrangements under Medicare. Funds appropriated for these grants amounted to $38.4 million in 1989–90.

Community Organisations Support Program—COSP

The Community Organisations Support Program (COSP) was formed in April 1990 following an amalgamation of several smaller grants programs to community organisations.

The primary objective of the program is to fund initiatives which will support the infrastructure needs of community based non-profit organisations and groups whose activities are deemed to relate to the interests of the Community Services and Health portfolio.

Homeless youth

The innovative Health Services for Homeless Youth Program was established with funding in the 1989–90 Budget as part of the $100 million strategy 'Towards Social Justice for Young Australians'. The Program aims to develop and implement innovative primary health care services for homeless youth in major metropolitan areas. The Commonwealth has allocated $5 million over three years to this program ($10 million when cost-shared with States and Territories).

Emphasis is being placed on community involvement in service delivery, and on the coordination of this Program with other Commonwealth and State programs directed at homeless youth.

The ultimate objective of the Program is to encourage a more positive attitude among homeless young people towards their personal health care.

Women's health

In April 1989 the Prime Minister launched the National Women's Health Policy. In 1990–91 funds will be provided for the second year of the implementation of the Policy through:

- the National Women's Health Program, a four year cost shared program (commenced in 1989–90) totalling $33.72 million, for continued provision of women's health services and information and education to women; and for provision of training and education for health care providers and other professionals;
- the Alternative Birthing Services program, a $6.44 million four year program to encourage State and Territory Governments to provide a range of alternative birthing options; and
- the Women's Health Services (rural) Program, totalling $0.438 million over three years to enable Frontier Services, in conjunction with the Royal Flying Doctor Service, to extend services in rural areas in New South Wales, Queensland and Western Australia.

National Health Promotion Program—NHPP

Under the National Health Promotion Program (NHPP), the Commonwealth provides funding for projects which develop and promote effective strategies for health promotion and disease prevention, focusing on special risk factors and different population groups.

Projects funded under NHPP must be national in application and focus and be consistent with national health goals. Projects funded in 1989–90 included the Campbelltown Asthma project and prevention of falls and musculo-skeletal injuries among older adults. Other projects focused on diabetes, dental disease and targetted people from non-English speaking backgrounds, children and adolescents and the socially disadvantaged.

Funds appropriated to this program during 1989–90 amounted to $2.5 million including $1 million for the promotion of immunisation against childhood diseases.

Public Health Education Program (Kerr-White)

The Public Health Education Program funds seven universities and two research institutions to conduct public health training and research. Under this Program, approximately 300 full-time students have enrolled in postgraduate public health courses.

National Better Health Program—NBHP

The NBHP is a four year, $41 million program, which aims to achieve a better standard of health for all Australians, with an emphasis on low socio-economic groups and the reduction of health status inequities. Funds are provided by the Commonwealth and States/Territories on a cost-shared basis and administered on a 30:70 ratio respectively.

Preventative strategies are being developed and implemented in five priority areas: nutrition, hypertension, preventable cancers, injury prevention and the health of elderly people.

A National Better Health Plan has been endorsed by the Minister and five national projects have been approved for funding: a National Secretariat for the Healthy Cities Network, the National Injury Surveillance Unit, a consultancy to investigate sporting injuries, a Consumers and Food Labelling project and Phase 1 of the Health Promoting Hospitals project.

National Mental Health Policy

Following the report of the consultants Dr P. Eisen and Mr K. Wolfenden on the national mental health services policy, a Mental Health Working Group was established by the Australian Health Ministers Advisory Council to advise on national mental health policy taking into account public comment.

Subsequently, the Working Group developed the Mental Health Discussion Paper which served as the basis for widespread consultations with interested professional and community groups. These consultations, which were held in all major cities and a number of large provincial towns, were completed by February 1990.

At the June 1990 meeting of the Australian Health Minister's Conference, the final report of the Working Group—the National Mental Health Strategy Statement—outlining major components, mechanisms and a timeframe for a national mental health policy, was endorsed. The major components of this policy include:

- a National Charter of Consumer Outcomes;
- policy and service delivery models to achieve positive consumer outcomes; and
- a national mental health data strategy.

The National Mental Health Policy which results from this process is expected to be considered at the Australian Health Ministers' Conference in 1992.

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 outlined below.

The Royal Flying Doctor Service

The Royal Flying Doctor Service is a non-profit organisation providing medical and emergency evacuation services in remote areas of Australia. It is distinct from, but coordinates with, the Aerial Medical Service which is operated by the Northern Territory Government. The Royal Flying Doctor Service is financed mostly from donations and government contributions. For the year ended 30 June 1990 the Commonwealth Government paid grants totalling $9.3 million towards operational costs and assistance of $1.1 million towards an approved program of capital expenditure.

The Red Cross Blood Transfusion Service

This Service is conducted by the Australian Red Cross Society throughout Australia. The operating costs of the Service in the States and Territories are met by the State or Territory Government paying 60 per cent, the Society 10 per cent of donations, and the Commonwealth Government meeting the balance. Approved capital expenditure by the Service is shared on a dollar for dollar basis with the State and Territory Governments. Commonwealth Government expenditure for all States and Territories during 1989–90 was $24 million being $21.4 million for operating costs and $2.6 million for capital costs.

National Heart Foundation of Australia

The Foundation 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 1989 was $17.8 million of which $14.03 million was from public donations and bequests. Commonwealth, State and semi-government authorities made grants of $0.5 million for specific projects conducted by the Foundation. Since the inception of the Foundation, research has been a major function and a total of $4.97 million was expended in 1989 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 1989 the expenditure on research, education and community service totalled $9.43 million.

The World Health Organization—WHO

WHO is a specialised agency of the United Nations having as its 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 1990 was $3 million.

The International Agency for Research on Cancer—IARC

The 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 1990 was $0.9 million.

National Health Services and Advisory Organisations

Australian Health Ministers' Conference and the Australian Health Ministers' Advisory Council

The Australian Health Ministers' Conference (AHMC) and its advisory body, the Australian Health Ministers' Advisory Council (AHMAC) provide a mechanism for the Commonwealth Government, the State and Territory Governments to discuss matters of mutual interest concerning health policy, services and programs. Neither the Conference nor the Council has statutory powers, and decisions are reached on the basis of consensus. Their constitution rests on the formal agreement by the Commonwealth Government, the State and Territory Governments of the membership and functions.

The AHMC comprises the Commonwealth, State and Territory Health Ministers. Other Commonwealth Ministers may be invited to speak on items relevant to their portfolio. The New Zealand and Papua New Guinea Health Ministers may attend meetings as observers.

AHMAC comprises the head and the option of one other senior officer from the Commonwealth, State and Territory health authorities and the Department of Veterans' Affairs. The chairperson of the National Health and Medical Research Council, and the Director of the Australian Institute of Health may attend AHMAC meetings as observers. AHMAC was established by the April 1986 AHMC to replace the Standing Committee of Health Ministers (SCOHM) and the Australian Health Services Council (AHSC).

AHMAC may establish standing committees to serve on-going matters of concern to the Council and the Australian Health Ministers' Conference and ad hoc working parties or subcommittees to investigate and report on specific issues or aspects. The standing committees include the Intergovernmental Committee on Aids, the National Coordination Committee on Therapeutic Goods, the Subcommittee on Women and Health, Australian Coordinating Committee on Organ Registries and Australian Health Technology Advisory Council.

Health services organisations

The Commonwealth Serum Laboratories Commission—CSL

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 defined 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 seventy years, CSL has been Australia's chief supplier of biological medicines, insulins, vaccines, human blood fractions, diagnostic reagents 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). It is expected that CSL will be incorporated as a company by legislation scheduled to come into effect by the end of 1990.

The Australian Radiation Laboratory

The Laboratory is concerned with the development of national policy relating to radiation health and:

- 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;
- maintains national standards of radiation exposure and radioactivity;
- provides advice in relation to the quality and use of radiopharmaceutical substances; and
- in support of the above activities, undertakes research and development in the fields of ionising and non-ionising radiations which have implications for public and occupational health.

The Therapeutic Goods Administration Laboratories—TGAL

The TGAL (formerly the National Biological Standards Laboratory) is part of the Therapeutic Goods Administration of the Commonwealth Department of Community Services and Health. TGAL is comprised of the Antibiotics, Microbiology, Pharmacology, Pharmaceutical Chemistry, Virology and Animal Service sections.

TGAL monitors the quality, safety and efficacy of biological and pharmaceutical products and selected therapeutic devices available for use in Australia. The major activities are analysis of therapeutic goods for acceptable quality, developmental research associated with new or improved testing methods and the development of standards, evaluation of the manufacturing aspects of applications for marketing selected therapeutic goods, and provision of relevant advice and training to governments, industry and international organisations.

Commonwealth Government Health Advisory Organisations

The National Health and Medical Research Council—NHMRC

The NHMRC 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 Community Services and 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 1989–90 was $80.3 million. The Commonwealth Government also appropriated $2.6 million to the Public Health Research and Development Committee for disbursement to priority research areas. Expenditure for 1989–90 was $2.6 million. The secretariat for the Council and its Committees is provided by the Commonwealth Department of Community Services and Health and is located in Canberra.

The Australian Institute of Health—AIH

The Australian Institute of Health was established as a statutory body within the Commonwealth Community Services and Health portfolio in 1987. It is a Commonwealth health statistics and research agency which, as part of its national role, also provides support to the States and Territories in these areas primarily through the Australian Health Ministers' Advisory Council (AHMAC).

The Institute is governed by a 12-member Board including nominees of the Minister for Community Services and Health, AHMAC, the Public Health Association of Australia Inc., and the Consumers' Health Forum of Australia. Other members are the Australian Statistician, the Secretary of the Department of Community Services and Health and the Director of the Institute.

The mission of the Institute is to contribute to the improvement of the health of Australians and to the efficient use of resources in the provision of health services, including those directed at health promotion and illness prevention, by pursuing its legislative mandate to:

- collect and assist in the production of health related information and statistics;
- conduct and promote research into the health of Australians and their health services;
- undertake studies into the provision and effectiveness of health services and technologies; and
- make recommendations on the prevention and treatment of diseases and the improvement and promotion of health and health awareness of the people of Australia.

There are four major components to the Institute—Health Services Division, Health Monitoring Division, Health Technology Unit and Corporate Services Division. A small Secretariat provides support for the Board and Institute Committees and coordinates liaison with other organisations.

Three external units are currently funded by the Institute—the National Perinatal Statistics Unit at the University of Sydney, the Dental Statistics and Research Unit at the University of Adelaide, and the National Injury Surveillance Unit.

In investigating and documenting Australia's health services and programs, the Health Services Division mainly focuses on the traditional matters relating to health services—costs, use, access, facilities, resources and efficiency. It is also examining quality of care, the effects of ageing on the demand for health services, and the changing demands for services over the past 10 to 15 years. The Division's work includes the development of statistical and information systems on, and research into, the provision and use of health services. In addition, work is undertaken and advice given on a number of health economics issues.

The Division's major activities include:

- the development of databases to describe components of the health services system. These include health expenditure, the health labour force, use and costs of hospitals and other health related institutions, medical service use. The production of comparable statistics on the use, costs, revenues and staffing levels of various institutional health services will be assisted by the development of a national minimum data set which is being undertaken by the Division;

- the development of models of health services demand and supply, including models to project the health labour force and to project the demand for hospitals services as the population ages;
- the development of measures of casemix—the types of cases treated in acute hospitals—and the dissemination of ideas and research related to casemix; and
- organisation of workshops on issues in the evaluation of health services, and other activities to promote research into health services.

The Health Technology Unit provides the major Australian focus for health technology assessment. Partly through its support for the National Health Technology Advisory Panel, and partly through its own work, the Unit promotes, undertakes and coordinates assessments of new and established health care technologies, paying particular attention to their costs and effectiveness. It publishes assessments and reviews of health care technology, carried out by or in association with the Unit, and collects appropriate statistics.

The Unit has provided support for the Super Speciality Services Subcommittee of AHMAC, a body responsible for the preparation of guidelines on certain expensive or specialised services.

Major projects include:

- an assessment of magnetic resonance imaging (MRI). The Unit is analysing data collected from five MRI units installed in teaching hospitals in Australia;
- the preparation of reports on technologies with major implications for health care. At present, studies are in progress on developments in peripheral angioplasty, cardiac imaging, renal stone therapy, bone thermography, cardiac defibrillators and cochlear implants;
- trials of the use of dry-chemistry pathology equipment in general practice and of biliary lithotripsy; and
- the preparation of guidelines on services for renal dialysis, sleep centres, refractory epilepsy and neonatal intensive care.

The Health Monitoring Division is responsible for improving statistical and related information on the nation's health, including the development of databases, and for monitoring, investigating and reporting on the health of the Australian people. It collates and analyses national data, with special attention to identifying differences in health status between different segments of the population.

Major projects include:

- participation in the monitoring and data components of the National Better Health Program, a cooperative Commonwealth–State/Territory health promotion and disease prevention program;
- the Risk Factor Prevalence Survey, 1989, in conjunction with the National Heart Foundation and the Department of Community Services and Health;
- collection and dissemination of information on Aboriginal health, and the development of national Aboriginal health statistics;
- investigation of the feasibility and cost-effectiveness of providing a comprehensive, coordinated nation-wide program of breast and cervical cancer screening;
- development of the National Death Index, a mortality database, the National Cancer Statistics Clearing house and an asthma-related deaths collection;

- operation of a national nosology reference centre, which is the designated point of contact with the WHO on matters relating to the classification of diseases; and
- an epidemiological study of the carcinogenicity of the antimalarial agent, dapsone, in Australian Vietnam veterans.

The National Injury Surveillance Unit is based in Adelaide, where it developed out of the three year National Injury Surveillance and Prevention Project, a joint activity of the Institute and the Child Accident Prevention Foundation of Australia. The Unit is developing and monitoring statistical collections relating to injury, under a grant from the National Better Health Program. It will also play a major role in monitoring new initiatives in road safety.

The National Perinatal Statistics Unit, based at the University of Sydney, collects national data on perinatal health and mortality and on congenital anomalies, and conducts epidemiological studies in this field. The Unit's activities include analytical studies of selected congenital malformations and Caesarian births, and the development of a national perinatal data system and a national congenital malformation monitoring system. It also operates a register of IVF (in-vitro fertilisation) pregnancies.

The Dental Statistics and Research Unit at the University of Adelaide is developing information and statistics on the dental labour force and on dental health status. The Unit is currently negotiating with State and Territory Dental Registration Boards to gain access to relevant information.

The National Occupational Health and Safety Commission—NOHSC

The National Commission (known by its working title as *Worksafe Australia*) is a tripartite body comprising representatives of the Commonwealth Government, the State and Territory Governments, and peak employee and employer bodies.

It is a statutory authority established by the Commonwealth Government to develop, facilitate and implement national occupational health and safety strategies and to seek the development of common approaches to occupational health and safety legislation.

NOHSC has specified six priority areas for immediate attention and towards which the resources of the organisation are being directed. These issues are occupational back pain, noise-induced hearing loss, safe management of chemicals used at work, occupational skin disorders, occupational cancer and mechanical equipment injuries.

The activities of the organisation include the following:

- the development of national standards and codes of practice;
- administration of the National Industrial Chemicals Notification and Assessment Scheme;
- national statistical responsibilities in the field of occupational health and safety;
- multidisciplinary research (including epidemiology, biostatistics, work physiology, occupational psychology, ergonomics and toxicology), and through research grants;
- teaching responsibilities through a Master of Occupational Health and Safety course and several non-academic short courses;
- training and education through the development of national skill standards and teaching resource materials, study awards, and by encouraging the inclusion of training in occupational health in school and post secondary courses; and
- the collection, analysis and dissemination of information.

Individuals and groups with specialist knowledge or requirements in the field of occupational health and safety assist through their participation in various committees of the Commission.

The Australian Drug Evaluation Committee—ADEC

The Committee makes medical and scientific evaluations of such goods for therapeutic use as the Minister for Community Services and 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 Community Services and 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 coopt and seek advice from specialist medical colleges and associations and from the medical and allied professions, drug manufacturers and other sources.

The Committee met on six occasions through 1989–90. Sixty one applications for approval for general marketing of new drugs were considered, resulting in 33 recommendations for approval, 23 for rejection and eight for deferral. There were a further 33 applications for extension of therapeutic indications, or amended dosage regimens of which 21 were approved, eight rejected and four deferred.

The Therapeutic Device Evaluation Committee—TDEC

The Committee makes medical and scientific evaluations of therapeutic devices and advises the Minister for Community Services and Health on the importation, manufacture and distribution of therapeutic devices in Australia. It has powers to appoint subcommittees and establishes these to provide advice on specialist issues and to develop detailed and complex proposals for consideration.

The Committee met on three occasions in 1989–90 with three additional subcommittee meetings. Major activities included the exemption of generic intra-ocular lenses from pre market evaluation, the re-evaluation of all intra-uterine devices for supply in Australia along with the production of a pre-inserting information leaflet, the development of guidelines for evaluating on the basis of substantial equivalence, and the registration and listing of therapeutic devices. TDEC also recommended that an embargo be placed on the importation of implantable material of cattle (and sheep and goat) origin sourced from the United Kingdom and the Republic of Ireland until the significance of Bovine Spongiform Encephalopathy in humans was established.

TDEC provides policy and program management advice for the therapeutic device program carried out by the Therapeutic Goods Administration. The program gave some 87 pre market approvals in 1989–90 of which 30 were biomaterials. There were 177 problem investigations completed in the same period.

The Therapeutic Goods Committee—TGC

The Committee provides advice to the Minister regarding the standards applicable to goods for therapeutic use including the requirements for packaging and labelling of such goods. Members of the Committee are selected for their individual expertise in pharmaceutics, pharmaceutical chemistry, pharmacology, microbiology, virology, veterinary science, medical devices, the manufacture of pharmaceuticals and therapeutic devices and consumer affairs.

TGC subcommittees active during 1989-90 included those on Child Resistant Packaging, General Requirements for Labels for Medicines and General Requirements for Labels for Therapeutic Devices. A new Therapeutic Goods Order (No. 32) on General Requirements for Labels for Therapeutic Goods came into effect in September 1989 and Therapeutic Goods Order (No. 33) on Child Resistant Packaging was signed by the Minister in February 1990.

The Therapeutic Goods Administration Laboratories—TGAL

The TGAL (formerly the National Biological Standards Laboratory) is part of the Therapeutic Goods Administration of the Commonwealth Department of Community Services and Health. TGAL is comprised of the Antibiotics, Microbiology, Pharmacology, Pharmaceutical Chemistry, Virology and Animal Services sections.

TGAL monitors the quality, safety and efficacy of biological and pharmaceutical products and selected therapeutic devices available for use in Australia. The major activities are analysis of therapeutic goods for acceptable quality, development of standards, evaluation of the manufacturing aspects of applications for marketing selected therapeutic goods, and provision of relevant advice and training to governments, industry and international organisations.

National Campaign Against Drug Abuse—NCADA

The National Campaign Against Drug Abuse (NCADA), is a program aimed at minimising the harm caused to Australian society by the misuse of drugs, both licit and illicit.

A feature of the Campaign, and one which differentiates it from previous approaches in Australia and the approach used by a number of other nations, is its focus on both the reduction of the demand for drugs and on drug supply containment activities.

The Campaign was launched following the special Premiers' Conference on Drugs in April 1985, when all Governments—Commonwealth, State and Territory—committed themselves to this initiative, involving both the allocation of new financial resources and new ways of addressing drug problems in Australia. The strategy addresses alcohol and other drug problems through a partnership of governments and between the government and non-government sectors.

The Campaign is ongoing and is oversighted by a Ministerial Council on Drug Strategy (MCDS), comprising the Commonwealth Government, and the State and Territory Governments.

The Commonwealth contributed $30 million in 1989–90, of which $18.8 million was allocated to the States and Territories which matched it on a dollar for dollar basis, and $11.2 million to national initiatives in the areas of prevention, including The Drug Offensive, data management and research.

During 1988–89, over 380 separate projects were funded under the Commonwealth–State cost-sharing arrangements. These projects cover such areas as education, training, residential and non-residential treatment, community development and consultancy, research, evaluation and monitoring.

The range of projects involved reflects the diversity of drug abuse problems in Australia, and the recognition by NCADA of the special needs of groups within the community such as youth, Aboriginal people, prisoners, women, intravenous drug users and people of non-English speaking background.

Information research and evaluation are central parts of the national NCADA activities and include:

- a national media information campaign, 'The Drug Offensive', which is aimed at increasing public awareness of the harm caused by drugs and providing information on them through campaigns such as the pharmaceutical campaign and the young women and smoking campaign;
- provision of almost $5.8 million in support of 102 research projects since 1985;
- establishment of two national centres for drug research: the Commonwealth in 1989–90 allocated $1.4 million per annum to a Sydney-based centre for drug treatment and rehabilitation, and a Perth-based centre on research into the prevention of drug abuse;

- support of a major project to enhance the teaching of drug and alcohol issues in the undergraduate medical curricula-funding totalling $0.6 million has been offered to the 10 university medical schools by the Department of Employment, Education and Training for this project; and
- proposed establishment of a national Centre for Education and Training on Addictions (CETA) to undertake training and research activities to meet the needs of those involved in the treatment/rehabilitation of people with drug and alcohol addiction problems. Funding is initially for three years from 1990 and will be reviewed by the Australian Research Council at three-yearly intervals for a total period of nine years.

The first three years of the Campaign were evaluated by an independently led review team in 1988. This evaluation found that:

> "... the campaign to date has been a major success, having in three years made considerable progress towards its goal of minimising the harm caused by drugs in Australian society..."

In general terms the great majority of those consulted believed that the investment of money and the effort that had been made in NCADA to date were worthwhile. Following this report a second evaluation is being planned to cover the period from 1985 to 30 June 1991.

The Commonwealth Government has agreed to an extension of the funding for another triennium until 1991–92.

Supply reduction strategies are also being funded under the Campaign. Increases in computer and staff capacity were provided to the Australian Federal Police to strengthen its ability to deal with drug trafficking. Similarly, the Australian Customs Service, already hard-pressed dealing with a large coastline, received substantial increases in equipment and human resources to improve its capacity to prevent drugs from illegally entering Australia.

Associated legislative developments have sought to bring a consistency of approach among the States and the Commonwealth and to introduce legislation to enable the forfeiture and confiscation of assets of convicted drug dealers.

The experience to date with tracing assets has highlighted the problems that arise where assets are transferred overseas or change hands before a suspect is convicted, thus making it very difficult for law enforcement agencies to recover the profits of criminal activity. Legislation now enables Australia to grant and request mutual assistance in criminal matters, usually subject to a treaty with the country concerned. The Mutual Assistance Treaties will enhance the Ability of Australian and overseas law enforcement agencies to assist each other in the investigation and prosecution of drug crimes and will, in most cases, allow for the tracing, freezing, confiscation and recovery of the proceeds of drug trafficking. In addition, Australia has undertaken an extensive program of negotiation of modern extradition treaties, based on newly enacted extradition legislation. This is intended to facilitate the return of fugitives (including alleged drug offenders) for prosecution in the country where the offence occurred. With over 30 modern extradition and mutual assistance treaties already in force, there is also a significant number in which negotiations are substantially completed.

Legislation has now also been introduced in most States and Territories to allow law enforcement and drug problem treatment agencies to work cooperatively. Under this legislation, persons convicted of offences which were motivated by drug dependence are able to apply to the court to receive treatment for their problem in lieu of a gaol term. Subject to continuous review of the progress of offenders, this approach is both cheaper than gaol and has the potential to shorten the criminal career of drug dependents.

The international aspects of drug trafficking are also being addressed. The United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances was adopted at Vienna on 19 December 1988, and on 14 February 1989, Australia became a signatory, subject to ratification.

When this Convention enters into force, it will become the third international instrument adopted to combat drug abuse. Whilst the earlier two, the Single Convention on Narcotic Drugs, 1961, and the Convention on Psychotropic Substances, 1971, had the principal aim of controlling the manufacture, distribution and use of LICIT narcotic drugs and psychotropic substances for medical and scientific use, the purpose of this treaty is to curb the synthesis and traffic in ILLICIT recreational drugs, to assist in bringing persons involved in these activities to justice, and to enable parties to seize profits arising from the trafficking of these drugs.

The Department of Community Services and Health will have responsibilities in respect of activities which provide for control over movement of materials and equipment used in manufacture and demand reduction programs.

Under Article 12 of the new Convention parties are required to establish and maintain a system to monitor international trade in substances known to be used in the illegal manufacture of drugs of dependence. The implementation of these controls is being negotiated with the Australian Customs Service, the Australian Bureau of Statistics, chemical industry groups and State Governments.

Communicable Diseases

Quarantine

The *Quarantine Act 1908* is administered jointly by the Commonwealth Departments of Community Services and Health and Primary Industries and Energy 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 Community Services and Health of all cases of illness on board at the time of arrival. Passengers or crew members who are believed to be suffering from a quarantinable 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 six 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.

Animal quarantine

The Department of Primary Industries and Energy, 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 and pests.

Importation of animals is restricted to certain species from designated overseas countries whose disease status and pre-entry quarantine supervision and facilities meet Australia's stringent requirements. With few exceptions all imported animals are required to serve a period in quarantine on arrival.

Animal quarantine stations are located at Sydney, Melbourne, Adelaide and Perth. 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, reproductive material and zoological animals from high risk countries is facilitated.

Measures to prevent the entry of exotic diseases and pests are also applied through the rigorous screening of applications to import biological materials and animal products and through inspection and treatment procedures on arrival.

Plant quarantine
Australia is free of numerous plant pests and diseases that occur elsewhere in the world. The importation into Australia of plant material is therefore subject to strict quarantine control.

The Department of Primary Industries and Energy has responsibility, in consultation with the States and relevant groups, for administering these controls. Some materials are admitted only under certain conditions while others are prohibited altogether. However, the *facilitation of safe importation is considered to be the best available means of reducing* pest and disease risk involved in illegal importation.

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, forests or native vegetation. Measures to prevent the entry of unwanted exotic plant pests and diseases involve careful screening of applications to import plant material and inspection and treatment procedures on arrival.

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 Community Services and 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 Department, and are reproduced in the following tables.

Not all diseases are notifiable in all States and Territories and factors such as the availability of medical and diagnostic services, varying degrees of attention to disease notification and the source of notifications (i.e. whether notified by medical practitioners or by diagnostic laboratories), 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, NUMBER OF CASES NOTIFIED BY STATES AND TERRITORIES, 1989

Disease	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Total*
Amoebiasis*(a)*	6	4	8	29	16	—	—	1	64
Ankylostomiasis*(a)*	—	—	—	17	77	12	*(b)*	—	106
Anthrax*(a)*	—	—	—	—	—	—	—	—	—
Arbovirus infection*(a)*	389	77	1,427	115	677	63	61	—	2,809
Brucellosis	—	—	18	1	1	—	—	—	20
Campylobacter infection*(a)*	1,875	57	*(b)*	1,501	497	5	310	34	4,279
Chancroid	1	*(b)*	—	*(b)*	2	*(b)*	—	—	3
Cholera	—	—	—	—	—	—	—	—	—
Congenital rubella syndrome	—	—	—	—	—	*(b)*	—	—	—
Diphtheria*(a)*	—	1	—	—	—	—	—	—	1
Donovanosis*(a)*	—	*(b)*	45	*(b)*	17	—	37	—	99
Giardiasis*(a)*	659	11	*(b)*	972	397	—	—	21	2,060
Genital herpes	876	—	1,660	*(b)*	*(b)*	*(b)*	4	41	2,581
Gonococcal ophthalmia neonatorum	1	*(b)*	—	—	*(b)*	*(b)*	—	*(b)*	1
Gonorrhoea*(a)*	603	—	994	200	741	16	584	15	3,153
Hepatitis A (infectious)	63	14	127	36	99	6	115	—	460
Hepatitis B (serum)*(a)*	465	149	1,714	48	550	45	27	19	3,017
Hepatitis—unspecified	21	6	9	4	*(b)*	*(b)*	1	2	43
Hydatid disease*(a)*	2	—	5	3	1	3	—	1	15
Lassa Fever	—	—	—	—	—	—	—	—	—
Legionnaires disease*(a)*	52	8	18	12	12	1	—	*(b)*	103
Leprosy	12	5	8	—	4	—	5	—	34
Leptospirosis*(a)*	58	22	—	5	4	10	—	—	99
Lymphogranuloma venereum*(a)*	—	*(b)*	—	*(b)*	*(b)*	*(b)*	*(b)*	—	—
Malaria*(a)*	91	65	487	34	60	9	5	19	770
Marburg disease	—	—	—	—	—	—	—	—	—
Measles	76	*(b)*	51	16	18	*(b)*	*(b)*	8	169
Meningococcal infections*(a)*	58	67	6	27	30	*(b)*	15	1	204
Non-specific urethritis	1,708	*(b)*	1	*(b)*	*(b)*	*(b)*	30	*(b)*	1,739
Ornithosis*(a)*	4	1	—	18	2	—	—	—	25
Pertussis (whooping cough)	202	57	*(b)*	136	204	3	9	3	614
Plague	—	—	—	—	—	—	—	—	—
Poliomyelitis*(a)*	—	—	—	—	—	—	—	—	—
Q-Fever(a)	138	6	181	21	5	(b)	2	(b)	353
Rabies	—	—	—	—	—	—	—	—	—
Salmonella infections(a)	1,333	218	1,223	531	552	167	416	52	4,492
Shigella infections(a)	94	29	125	75	284	6	165	1	779
Smallpox	—	—	—	—	—	—	—	—	—
Syphilis(a)	315	—	1,061	55	200	—	460	8	2,099
Tetanus	—	2	—	—	9	—	—	—	11
Trachoma	—	(b)	1	62	441	—	(b)	—	504
Tuberculosis (all forms)(a)	452	369	163	123	135	13	61	35	1,351
Typhoid fever(a)	19	24	5	5	4	—	—	—	57
Typhus (all forms)(a)	—	—	1	—	1	—	—	—	2
Vibrio parahaemolyticus infections(a)	8	(b)	(b)	2	—	—	—	(b)	10
Yellow Fever	—	—	—	—	—	—	—	—	—
Yersinia infections(a)	116	—	(b)	125	—	(b)	—	(b)	241

(a) Confirmed by appropriate diagnostic tests. *(b)* Not notifiable.
NOTE: For some of the diseases shown above information is not available or the diseases are not notifiable in certain States/Territories.
Source: Commonwealth Department of Community Services and Health.

NOTIFIABLE DISEASES, NUMBER OF CASES NOTIFIED: AUSTRALIA, 1985–1989

Disease	*1985*	*1986*	*1987*	*1988*	*1989*
Amoebiasis*(a)*	87	54	58	60	64
Ankylostomiasis*(a)*	43	40	57	35	106
Anthrax*(a)*	1	—	1	—	—
Arbovirus infection*(a)*	660	1,414	1,085	897	2,809
Brucellosis	22	12	12	16	20
Campylobacter infection*(a)*	2,343	2,922	2,923	4,082	4,279
Chancroid	5	12	4	4	3
Cholera	2	—	—	2	—
Congenital rubella syndrome	3	2	3	2	—
Diphtheria*(a)*	17	44	32	61	1
Donovanosis*(a)*	73	185	148	133	99
Giardiasis*(a)*	1,091	1,316	1,508	1,753	2,060
Genital herpes	1,707	2,136	2,359	2,129	2,581
Gonococcal Ophthalmia neonatorum	14	5	5	3	1
Gonorrhoea*(a)*	7,605	6,585	4,979	4,079	3,153
Hepatitis A (infectious)	848	1,685	715	600	460
Hepatitis B (serum)*(a)*	1,645	1,766	1,605	1,683	3,017
Hepatitis—unspecified	122	136	131	69	43
Hydatid disease*(a)*	14	13	17	15	15
Lassa Fever	—	—	—	—	—
Legionnaires disease*(a)*	28	68	96	67	103
Leprosy	38	27	31	20	34
Leptospirosis*(a)*	185	179	133	104	99
Lymphogranuloma venereum*(a)*	5	4	—	—	—
Malaria*(a)*	421	696	574	601	770
Marburg disease	—	—	—	—	—
Measles	*(b)*	*(b)*	—	248	169
Meningococcal infections*(a)*	53	51	96	126	204
Non-specific urethritis	4,872	8,063	7,384	3,210	1,739
Ornithosis*(a)*	17	43	13	21	25
Pertussis (whooping cough)	587	601	291	153	614
Plague	—	—	—	—	—
Poliomyelitis*(a)*	—	1	—	—	—
Q-Fever*(a)*	202	367	355	424	353
Rabies	—	—	—	—	—
Salmonella infections*(a)*	2,668	2,494	2,739	3,484	4,492
Shigella infections*(a)*	734	833	586	581	779
Smallpox	—	—	—	—	—
Syphilis*(a)*	3,523	3,594	3,190	3,056	2,099
Tetanus	11	5	5	5	11
Trachoma	63	233	274	268	504
Tuberculosis (all forms)*(a)*	1,088	1,041	686	1,165	1,351
Typhoid fever*(a)*	31	45	47	40	57
Typhus (all forms)*(a)*	10	11	9	8	2
Vibrio parahaemolyticus infections*(a)*	4	6	6	2	10
Yellow Fever	—	—	—	—	—
Yersinia infections*(a)*	60	78	122	172	241

(a) Confirmed by appropriate diagnostic tests. *(b)* Not notifiable.
NOTE: For some of the diseases shown above information is not available or the diseases are not notifiable in certain States/Territories.
Source: Commonwealth Department of Community Services and Health.

Childhood immunisation

Immunisation is recommended for all Australian children as a protection against childhood diseases such as poliomyelitis, diphtheria, measles, mumps, tetanus and whooping cough. Immunisation programs are implemented in all States and Territories of Australia. The childhood immunisation schedule, as recommended by the National Health and Medical Research Council, is available from the Commonwealth Department of Community Services and Health.

A new measles/mumps/rubella (MMR) vaccine has been introduced to replace the measles/mumps vaccine for all children aged 12 to 15 months. Rubella immunisation remains routinely offered to all females between their 10th and 15th birthdays through the Schoolgirl Rubella Immunisation programs, in addition to their MMR immunisation at 12 to 15 months.

Hepatitis B vaccine is currently offered to neonates born to mothers belonging to community groups in which the carrier rate for Hepatitis B is estimated to exceed five per cent.

Acquired Immune Deficiency Syndrome—AIDS

The National HIV/AIDS Strategy was launched in August 1989. The Strategy outlines the direction of AIDS policy and the specific programs that will be put in place to manage the epidemic into the 1990s. It was developed following extensive national community consultations and release of the Policy Discussion Paper *AIDS: A Time to Care, A Time to Act—Towards a Strategy for Australians* in November 1988. To date the majority of National Strategy Recommendations have been, or are in the process of being implemented.

The Strategy is coordinated at the national level by the Aids Policy and Programs Branch of the Commonwealth Department of Community Services and Health. The Branch has the responsibility for coordinating and evaluating community AIDS projects, assessing the funding of these initiatives, and undertaking liaison with a wide range of Australian and overseas agencies. In addition, the Department closely monitors medical and scientific developments in relation to the disease. It also provides executive support for national AIDS Committees which have been established to consider and advise on all aspects of AIDS.

These committees include:

- the Australian National Council on AIDS (ANCA), established in March 1988 to combine the functions of the former AIDS Task Force and NACAIDS, to advise the Commonwealth Minister for Community Services and Health on all aspects of AIDS;
- the National AIDS Forum, also established in March 1988, to ensure that ANCA and the Minister maintain close communication with, and receive advice from, individuals and organisations involved in the fight against AIDS;
- the Parliamentary Liaison Group on AIDS, established to bring together Commonwealth parliamentarians to enable them to keep abreast of AIDS issues and to provide advice on community attitudes to the disease; and
- the Intergovernmental Committee on AIDS, established to bring together the States and the Commonwealth to discuss AIDS policy and financial matters.

In 1989–90 the Commonwealth made available over $59 million for the fight against AIDS. This expenditure was divided between the National AIDS Program ($14.5 million), the AIDS Matched Funding Program ($19.5 million) and Medicare payments to the States ($23 million).

The Commonwealth has allocated approximately $79 million to the AIDS program in 1990–91. $24 million is earmarked for the National AIDS Program and $22.1 million will be made available under the Matched Funding Program. Under the Matched Funding Program, the Commonwealth has continued assistance to maintain the safety of our blood supply by supporting the screening of blood transfusion services throughout Australia. A further $30.2 million will be paid to the States/Territories under Medicare arrangements for the treatment of HIV/AIDS in public hospitals. This component will be indexed to the actual growth in AIDS cases treated.

Activities under the National AIDS Program included research, the national AIDS education campaign, grants to community-based organisations and to develop educational resources for health care workers, exchange of information both within Australia and internationally and support of national AIDS advisory committees.

A major national mass media campaign was developed during the year and launched in June 1990 by the Minister. It targeted intravenous drug users and their sexual partners and aimed to socialise the use of condoms and needle hygiene practices. Advertisements appeared on television, radio and in the cinema and press. Printed materials were produced to complement these and services were supplemented to meet demand created by the campaign.

National educational activities were reinforced by grants to a range of community organisations for AIDS education projects. A new grants scheme was established under the national HIV/AIDS strategy, the Commonwealth AIDS Workforce Information, Standards and Exchange (CAWISE) Program, to ensure that the workforce, particularly in occupations affected by HIV, has access to information and resource materials, retraining and skills development programs and development of guidelines and standards.

Educational Materials on AIDS prevention were also produced and distributed to international travellers.

During 1989–90, the research activities of the National Centres in HIV Virology and Epidemiology and Clinical Research (previously known as the special units) continued and a number of grants and training awards were awarded to both individuals and groups for biomedical and behavioural research into AIDS. The special unit in epidemiology continues its research into the clinical aspects of the drug, Azidothymidine (AZT).

The third National Centre, the National Centre in HIV Social Research has recently been established. The purpose of this unit is to conduct and coordinate research into the effects of the epidemic, to identify educational and training needs and to evaluate specific social aspects of transmission and the impact of education and prevention programs and policy initiatives.

Under the national strategy funding guidelines, the Minister approved an increase in funding to the National HIV Reference Laboratory for 1989–90. The Reference Laboratory is responsible for evaluation of new diagnostic kits for HIV infection and quality control of HIV testing programs in Australia.

On the international front, Australia will provide assistance to countries in the Western Pacific and South East Asian Regions and will contribute a total of $2 million in grants to the WHO global program on AIDS over a 3 year period.

In August 1990 the Department co-hosted an international AIDS conference with the WHO entitled 'AIDS in Asia and the Pacific'. It was held in Canberra and attracted approximately 700 delegates from countries within the region and from other countries.

REPORTED AIDS CASES TO 31 JULY 1990

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*
Number of cases—								
Males	1,174	386	129	61	81	10	3	25
Females	34	9	6	2	6	1	0	0
Known deaths—								
Number	758	206	88	36	42	6	2	15
Per cent of cases	65.7	17.8	7.6	3.1	3.6	0.5	0.2	1.3

Source: Commonwealth Department of Community Services and Health.

CASES OF AIDS AND KNOWN DEATHS FROM AIDS BY TRANSMISSION CATEGORY, AUSTRALIA, TO 31 OCTOBER 1989

	Cases				*Known deaths*			
Transmission category—	*Males*	*Females*	*Total*	*Per cent of all cases*	*Males*	*Females*	*Total*	*Per cent of cases by category*
Homo-Bisexual	1,352	0	1,352	88.4	711	0	711	52.6
Heterosexual IVDU*(a)*	10	8	18	1.2	4	1	5	27.8
Homo-Bisexual IVDU*(a)*	42	0	42	2.7	20	0	20	47.6
Haemophilia	17	0	17	1.1	8	0	8	47.1
Heterosexual contact	12	12	24	1.6	7	3	10	41.7
Blood transfusion*(b)*	36	24	60	3.9	28	23	51	85.0
Other	8	2	10	0.7	4	1	5	50.0
Under investigation	4	2	6	0.4	4	0	4	66.7
Total	**1,481**	**48**	**1,529**	**100.0**	**786**	**28**	**814**	**n.a.**

(a) Intravenous drug user. *(b)* Includes receipt of blood products or tissue.
Source: Commonwealth Department of Community Services and Health.

Hospitals

Repatriation hospitals and institutions

The Department of Veterans' Affairs administers a national hospital system consisting of six acute-care Repatriation General Hospitals (RGHs) with one in each State capital; three Repatriation Auxiliary Hospitals (RAHs) with one in New South Wales, Victoria and Queensland and Anzac Hostel in Victoria.

A broad range of in-patient and out-patient services is available for the care and treatment of eligible veterans and their dependants. The RGHs contribute to the State health care services by treating members of the general community where capacity exists after the needs of entitled persons have been met. Limits on the level of available beds for community patients are determined by the Repatriation Commission.

The Department of Veterans' Affairs has fostered the development of rationalised treatment arrangements with the State health authorities to avoid the unnecessary duplication of facilities and services. All the RGHs are affiliated with universities.

In certain circumstances veterans may also receive treatment in public and private hospitals and nursing homes at the Department's expense. Under arrangements with State Governments, entitled persons requiring custodial psychiatric care are treated at departmental expense in State psychiatric hospitals.

The increasing age and frailty of the entitled veteran population has led the Government to undertake a series of reviews of the Repatriation Hospital System. As part of these reviews the Minister for Veterans' Affairs, Ben Humphreys, announced on 14 August 1988, that subject to meeting certain guarantees to veterans and staff, the RGHs were to be integrated into the State hospital system by 1 July 1995. Veterans and war widows will have a wider choice of hospital and doctor than under the current arrangements which support a centralised RGH in each capital city. This offers advantages medically and for personal convenience. Integration will also ensure the RGHs continue to operate as acute care hospitals attracting high quality professional staff.

Details of patients, staff and expenditure on repatriation hospitals, institutions and other facilities are given in Chapter 8, Social Security and Welfare.

Mental health institutions

The presentation of meaningful statistics of mental health services has become increasingly difficult because of a shift since the 1970s away from institutional 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 ill 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.

A National Minimum Dataset for Institutional Care is presently being developed by the Australian Institute of Health through the Australian Health Ministers' Advisory Council.

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 In-patients New South Wales* (4306.1), *Public Hospital Morbidity Victoria* (4301.2), *Hospital Morbidity Queensland* (4303.3) and *In-patient Separations from Recognised Hospitals South Australia* (4308.4) (ABS/SAHC). Statistics for Western Australia, the Northern Territory and the Australian Capital Territory are available from the relevant State and Territory health authorities.

Employment Injuries

Annual statistics on employment injuries are collected and published by some ABS State Offices, and the relevant worker's compensation agencies. However, these statistics rely upon administrative by-product data generated under the differing provisions of workers' compensation legislation in each State. Legislative differences, coverage and reporting deficiencies of the by-product source data and the absence of comparable data for the Commonwealth employee sector have to date prevented the production of comprehensive national employment injuries statistics.

The collection of statistics on occupational health and safety has undergone significant change following the Commonwealth Government's establishment of the National Occupational Health and Safety Commission (Worksafe Australia). This body is responsible for the facilitation and coordination of action, in collaboration with unions, business and State Governments, aimed at improving working conditions and reducing the incidence and severity of injury and illness in the workplace. The overall objectives of Worksafe Australia include plans to develop and implement improved systems for the recording and collection of statistical and other information. To this end, Worksafe Australia released a report 'National Data Set for Compensation-based Statistics' in April 1987, which proposed the collection of a standardised set of data items with associated concepts, classifications and definitions. It is proposed that once the National Data Set is fully implemented from 1 July 1990, by the State, Territory and Commonwealth workers' compensation systems, Worksafe Australia will publish comprehensive national employment injuries statistics.

Worksafe Australia released the first national occupational injuries statistics, in relation to the 1986–87 financial year, in 1990. The national data was compiled from State based workers' compensation data. Commonwealth data is not included.

In 1990 Worksafe Australia and Standards Australia jointly released the 'Workplace injury and disease recording standard'. The Standard was developed to provide individual workplaces with a guide on how to establish an inexpensive and easy to use method of recording information on work injury and disease.

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 WHO. The statistics in the table below show the number of deaths registered during 1989, 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 1989 were diseases of the circulatory system (accounting for 45.7 per cent), neoplasms (24.5 per cent), diseases of the respiratory system (8.5 per cent) and accidents, poisonings and violence (6.6 per cent). In 1989, fewer than one per cent of all deaths were due to infections and parasitic 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 (58.8 per cent in 1989) occur within 28 days after birth (*see* table on perinatal deaths within this chapter).

CAUSES OF DEATH IN EACH AGE GROUP, AUSTRALIA, 1989

	Age group (years)									
Causes of death	*Under one*	*1–14*	*15–24*	*25–34*	*35–44*	*45–54*	*55–64*	*65–74*	*75 and over*	*Total (a)*
					NUMBER					
Infectious and parasitic diseases	18	30	20	30	33	48	85	145	352	761
Neoplasms	7	150	153	364	1,083	2,517	5,979	9,284	10,887	30,424
Endocrine, nutritional and metabolic diseases and immunity disorders	9	26	25	112	172	162	366	695	1,422	2,989
Diseases of the nervous system and sense organs	47	64	68	68	100	112	185	475	1,271	2,390
Diseases of the circulatory system	13	23	72	208	669	1,805	5,492	13,172	35,375	56,829
Diseases of the respiratory system	47	35	71	66	120	279	1,095	2,744	6,154	10,611
Diseases of the digestive system	4	9	9	58	148	312	611	929	2,163	4,244
Congenital anomalies	493	99	37	26	18	21	35	26	18	773
All other diseases*(b)*	849	19	98	202	130	141	343	873	3,571	6,226
Signs, symptoms and ill-defined conditions	474	26	14	21	33	25	36	35	149	814
Accidents, poisonings and violence	43	440	1,703	1,556	1,022	708	659	710	1,327	8,171
All causes	**2,004**	**921**	**2,270**	**2,711**	**3,528**	**6,130**	**14,886**	**29,088**	**62,689**	**124,232**

For footnotes *see* end of table.

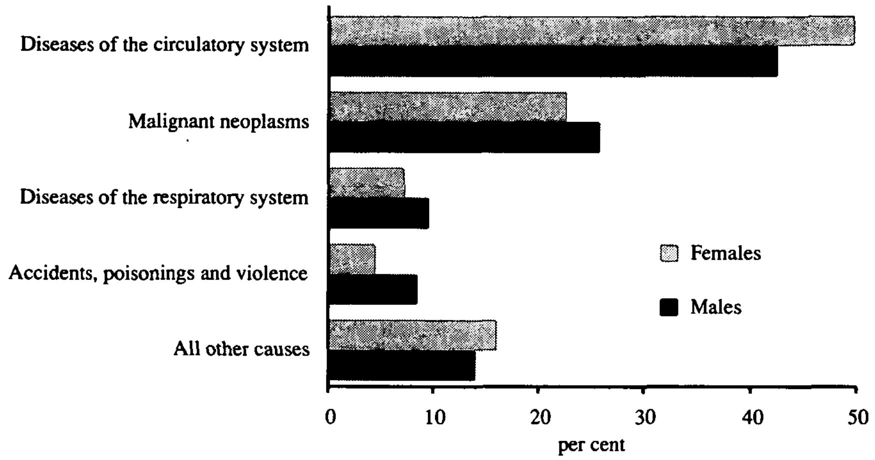
CAUSES OF DEATH IN EACH AGE GROUP, AUSTRALIA, 1989—*continued*

Causes of death	*Under one*	*1–14*	*15–24*	*25–34*	*35–44*	*45–54*	*55–64*	*65–74*	*75 and over*	*Total (a)*
				RATE(*c*)						
Infectious and parasitic diseases	7	1	1	1	1	3	6	13	48	5
Neoplasms	3	4	6	13	43	145	408	822	1,497	181
Endocrine, nutritional and metabolic diseases and immunity disorders	4	1	1	4	7	9	25	62	196	18
Diseases of the nervous system and sense organs	19	2	2	2	4	6	13	42	175	14
Diseases of the circulatory system	5	1	3	7	27	104	375	1,166	4,864	338
Diseases of the respiratory system	19	1	3	2	5	16	75	243	846	63
Diseases of the digestive system	2	(*d*)	(*d*)	2	6	18	42	82	297	25
Congenital anomalies	197	3	1	1	1	1	2	2	2	5
All other diseases(*b*)	338	1	4	7	5	8	23	77	491	37
Signs, symptoms and ill-defined conditions	189	1	1	1	1	1	2	3	20	5
Accidents, poisonings and violence	17	13	62	56	41	41	45	63	182	49
All causes	**799**	**27**	**82**	**97**	**140**	**353**	**1,017**	**2,575**	**8,620**	**738**
				PERCENTAGE(*e*)						
Infectious and parasitic diseases	0.9	3.3	0.9	1.1	0.9	0.8	0.6	0.5	0.6	0.6
Neoplasms	0.3	16.3	6.7	13.4	30.7	41.1	40.2	31.9	17.4	24.5
Endocrine, nutritional and metabolic diseases and immunity disorders	0.4	2.8	1.1	4.1	4.9	2.6	2.5	2.4	2.3	2.4
Diseases of the nervous system and sense organs	2.3	6.9	3.0	2.5	2.8	1.8	1.2	1.6	2.0	1.9
Diseases of the circulatory system	0.6	2.5	3.2	7.7	19.0	29.4	36.9	45.3	56.4	45.7
Diseases of the respiratory system	2.3	3.8	3.1	2.4	3.4	4.6	7.4	9.4	9.8	8.5
Diseases of the digestive system	0.2	1.0	0.4	2.1	4.2	5.1	4.1	3.2	3.5	3.4
Congenital anomalies	24.6	10.7	1.6	1.0	0.5	0.3	0.2	0.1	(*f*)	0.6
All other diseases(*b*)	42.4	2.1	4.3	7.5	3.7	2.3	2.3	3.0	5.7	5.0
Signs, symptoms and ill-defined conditions	23.7	2.8	0.6	0.8	1.0	0.4	0.2	0.1	0.2	0.7
Accidents, poisonings and violence	2.1	47.8	75.0	57.4	29.0	11.5	4.4	2.4	2.1	6.6
All causes	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(*a*) Total includes 5 deaths where age is not known. (*b*) Includes 853 deaths from conditions originating in the perinatal period and 1,929 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*) Less than 0.5. (*e*) Percentage of all deaths within each age group. (*f*) Less than 0.05.

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, 1989



Perinatal deaths

Since deaths within the first 28 days 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 WHO 'that national perinatal statistics should include all fetuses and infants delivered weighing at least 500 grams (or, when birth-weight 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 decreased from 10.65 per 1,000 total births in 1988 to 9.9 in 1989.

Of the conditions in the child, the three main groups responsible for perinatal deaths were *Hypoxia, birth asphyxia and other respiratory conditions* (38.2 per cent of the total), *Other conditions originating in the perinatal period* (22.1 per cent) and *Congenital anomalies* (22.0 per cent). Forty 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, 28.8 per cent were reported as being due to *Complications of placenta, cord and membranes.*

PERINATAL DEATHS BY CAUSE, AUSTRALIA, 1989

	Number of deaths			Rate		
Cause of death	Fetal	Neonatal	Perinatal	Fetal(a)	Neonatal (b)	Perinatal (a)
Conditions in fetus/infant—						
Slow fetal growth, fetal malnutrition and immaturity	135	130	265	0.54	0.52	1.05
Birth trauma	8	20	28	0.03	0.08	0.11
Hypoxia, birth asphyxia and other respiratory conditions	642	315	957	2.55	1.26	3.79
Fetal and neonatal haemorrhage	25	84	109	0.10	0.34	0.43
Haemolytic disease of fetus or newborn	12	5	17	0.05	0.02	0.07
Other conditions originating in the perinatal period	463	88	551	1.84	0.35	2.18
Congenital anomalies	161	354	515	0.64	1.41	2.04
Infectious and parasitic diseases	1	4	5	(c)	0.02	0.02
All other causes	4	58	62	0.02	0.23	0.25
Conditions in mother—						
Maternal conditions which may be unrelated to present pregnancy	163	94	257	0.65	0.37	1.02
Maternal complications of pregnancy	160	305	465	0.63	1.22	1.84
Complications of placenta, cord and membranes	587	136	723	2.33	0.54	2.87
Other complications of labour and delivery	25	25	50	0.10	0.10	0.20
No maternal condition reported	516	498	1,014	2.05	1.99	4.02
All causes—						
1989	**1,451**	**1,058**	**2,509**	**5.75**	**4.22**	**9.95**
1988	1,473	1,164	2,637	5.95	4.73	10.65
1987	1,432	1,159	2,591	5.84	4.75	10.56
1986	1,585	1,227	2,812	6.47	5.04	11.48
1985	1,518	1,416	2,934	6.10	5.73	11.79
1984	1,593	1,204	2,797	6.76	5.15	11.87

(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. (c) Less than 0.01.

Health-Related Surveys Conducted by the ABS

General health surveys

During the twelve months ended September 1990, the ABS conducted a survey to determine how healthy Australia is as a nation, how we use health services and facilities and how aspects of our lifestyle affect our health. This survey was the first in a new series of five-yearly health surveys to be conducted by the ABS. Similar surveys were conducted in 1977–78 and 1983.

Information was obtained by personal interview with members of 21,000 households selected at random throughout Australia. Topics covered included:

- recent illness/injury and long term conditions experienced;
- episodes in hospitals;
- consultations with doctors, dentists and other health professionals;
- use of medications;
- smoking, alcohol consumption and exercise patterns;
- height, weight and dietary indicators;
- children's health; and
- women's health.

The survey design enables linkages between these elements to be described and analysed. A range of demographic and socioeconomic items are also available for cross-classification with the health data, enabling an assessment to be made of the health, service usage etc, of groups such as the elderly, migrants, and low income families and to identify those with special needs.

Selected results of the survey will be published progressively from April 1991. An extensive range of unpublished data from the survey are also available on request to the ABS. Details of planned publications and other releases of survey results are contained in *1989–90 National Health Survey: Products and Services* (4362.0)

Health insurance surveys

These surveys have been conducted for the years 1979–84, 1986, 1988 and 1990. The 1984 survey covered employed wage and salary earners in capital cities only.

These surveys obtain information on the levels and types of private health insurance cover in the Australian community. Results are published in *Health Insurance Survey, Australia* (4335.0).

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10

EDUCATION

State and Commonwealth Government Responsibilities in Education

The Governments of the six Australian States and the two Territories have the major responsibility for education including the administration and substantial funding of primary, secondary and technical and further education. The State Governments administer their own systems of primary, secondary and technical and further education through Government departments responsible to State Ministers. In Queensland, Tasmania, and the Northern Territory a single education department is responsible for these three levels of education. In New South Wales, Victoria, Western Australia, South Australia and the Australian Capital Territory, there is a separate body responsible for technical and further education.

The Commonwealth Government is directly responsible for education 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 higher education institutions. Apart from its significant financial role the Commonwealth is involved in promoting national consistency and coherence in the provision of education across Australia.

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 for the Territories.

Administrative Structure of Education at the National Level

As mentioned above, the Commonwealth Government has direct responsibility for education only in external Territories under the Minister for the Arts, Sport, the Environment, Tourism and Territories. The Commonwealth Government, however, has special responsibilities for Aboriginals 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 July 1987 the Department of Employment, Education and Training was created by amalgamating the former Department of Education, elements of the former Department of Employment and Industrial Relations, parts of the Department of Science and also the Office of Youth Affairs (from the Department of Prime Minister and Cabinet). The education responsibilities entail grants to schools, student assistance, overseas students, awards and exchanges, tertiary education, language policy, educational research and statistics, publications, Aboriginal education, multicultural education, Asian and women's studies, and education and the arts. The Department 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.

The *National Board of Employment, Education and Training (NBEET)* was established under the *Employment, Education and Training Act 1988.* Proclaimed on 1 July 1988 it is the mechanism for providing coordinated and independent advice to the Government on employment, education, training and research in the context of the Government's broad social, economic and resource policies.

In establishing the Board the Government abolished the Commonwealth Schools Commission and the Commonwealth Tertiary Education Commission and transferred responsibility for program delivery, previously undertaken by the Commissions, to the Department of Employment, Education and Training. The Board provides for input from providers of education and training, and from business, industry and union organisations, as well as interested bodies in the community. It is assisted by four Councils.

- The *Schools Council* advises on the Commonwealth's policies and programs relating to schools, including the general development of primary and secondary education.
- The *Higher Education Council* advises on the general development of higher education in Australia, priorities and arrangements for the funding of higher education institutions and overseas marketing of Australian higher education products.
- The *Employment and Skills Formation Council* advises on technical and further education, employment and skills formation policies, programs and services, and the promotion of effective training through business and industry.
- The *Australian Research Council's* functions are to recommend on payments of research grants and on research awards and to provide advice to the Board on national research priorities and coordination of research policy.

A *Commonwealth–State Consultative Committee* has also been established to advise on State and Territory priorities and to provide a forum for the resolution of significant Commonwealth–State issues in relevant areas.

In addition to the NBEET arrangements, the Commonwealth Government has also made new advisory arrangements in a number of specific areas including women, Aboriginals, and in language policy and multicultural education.

- A *Women's Employment, Education and Training Advisory Group* has been formed to ensure appropriate consideration of issues relating to women's access and participation in employment, education and training, and to enhance links within the portfolio.
- The *National Aboriginal and Torres Strait Islander Education Policy* was launched in October 1989 by the Minister for Employment, Education and Training, the Hon. John Dawkins MP. Policy objectives will be implemented through the Aboriginal Employment, Education and Training Committee which replaces the National Aboriginal Education Committee.
- The *Australian Advisory Council on Languages and Multicultural Education* has also been established to advise and assist the Government with policy and implementation matters and to provide a forum for discussion on needs and priorities.

Commonwealth Government education authorities also function as coordinating agencies for joint activity by the States and Territories in a number of fields. From 1 January 1990, a Register of Australian Tertiary Education will be established to replace the work done by the Australian Council on Tertiary Awards (ACTA). The Register will list authorities (including institutions) empowered by the Commonwealth Government and the State and Territory Governments to accredit tertiary award courses. A Register Advisory Committee will also be established under the auspices of the Australian Education Council.

A number of bodies at the national level have an important coordinating, planning or funding role.

- The *Australian Education Council (AEC)* membership is made up of State and Territory Ministers for Education, and usually meets at least annually as a consultative body to consider matters of mutual interest and generally to facilitate the exchange of information and the coordination of common programs. It is supported by a Standing Committee including the Permanent Heads of Education in each State and Territory and the Secretary of the Commonwealth Department of Employment, Education and Training.
- 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 Conference of the Directors-General of Education, 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 the Commonwealth Government, and each of the State and Territory Governments, as well as from its own activities. The Council is involved in its own and contract research in cooperation 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. ACER acts as the national centre for the program of international surveys of student achievement. Authority for ACER's policy rests with its governing council.
- The *TAFE National Centre for Research and Development Ltd* was established in 1980 and is a company limited by guarantee. The main sources of funding are the Commonwealth Government (50 per cent) and the States and Territories (on a per capita basis). Initially involved in curriculum development issues, the Centre's general research thrust is now aimed towards industries' requirements of TAFE, common skills across crafts, multi-skilling, skill formation and retraining. The National TAFE Clearing House within the Centre provides a service disseminating information on research and development activities within TAFE in Australia.

There are also a number of non-government organisations which have coordinating roles in education at the national level. These include the National Catholic Education Commission, the National Council of Independent Schools Associations, the Australian Vice-Chancellors' Committee, the Australian Committee of Directors and Principals Ltd, the Australian Conference of Directors of TAFE and the Australian High School Principals' Association.

New Developments in Education

While States have primary responsibility for the education of young people, the Commonwealth has continued to play a significant role in addressing national priorities for schools. Considerable progress has been made in the development of national goals on schooling, curriculum collaboration in key subject areas, teacher education and the removal of unnecessary differences between school systems.

Since May 1988 the Commonwealth has been working cooperatively with the States to develop a national perspective for schools and to address a number of items of national interest against the background of ten common and agreed national goals for schooling.

Progress has been made towards a common curriculum framework for Australian schools. A mapping of the general curriculum and of the mathematics curriculum was completed and the findings released in early 1989. They received strong public and press support as the logical first step towards nationally agreed curriculum guidelines. Mappings of the science and technology curriculum have also been completed. Mapping of English literacy is underway and similar work is planned for studies of society and environmental education. These mappings will culminate in statements of principles, which set out the knowledge and skills to which every student is entitled, agreed areas of strength and those where further work is required, together with the necessary teacher development support required for implementation.

A national curriculum agency, Curriculum Corporation, a jointly owned company of the States and the Commonwealth, has been established to facilitate greater efficiency and effectiveness in curriculum development and dissemination through sharing of knowledge and scarce resources. Other areas where important work is being undertaken on a cooperative basis are improved school–TAFE links and development of a common approach to assessment.

Improving the quality of teaching is central to the National Schools Strategy. A number of reports prepared by Commonwealth agencies have contributed to an understanding of what constitutes teacher quality. Award restructuring is an opportunity for significant qualitative improvements in schooling through changes to work organisation, training and schooling practices. In May 1990 the Commonwealth brought together the key parties involved in award restructuring in teaching for initial negotiations at the national level. Arising from these negotiations the Commonwealth has agreed to provide major additional funding to government and non-government school authorities to support quality improvements in teaching. Funds are to be used to support improved career structures for classroom teachers, better salaries for classroom teachers as well as improvements in teacher education and work practices. A national cooperative project has been established to facilitate these quality improvements.

The Curriculum Corporation has been established, under the auspices of the Australian Education Council (AEC), and is developing a framework for ongoing cooperative curriculum development. Curriculum mapping exercises are continuing, and environmental education and Aboriginal education have been included.

A major initiative has been the move towards development of a national computerised information database for careers education together with the commencement of a broader examination of careers education issues.

The AEC is also looking at the area of post-compulsory education and training in the context of school–TAFE links. Currently the Commonwealth and all States and Territories are involved in national negotiations designed to provide a framework for improving the quality of teaching in schools.

The release of the White Paper, *Higher Education: A Policy Statement*, in July 1988 signalled the introduction of a series of reforms to the higher education system. Most of these came into effect in the 1989 academic year.

A major part of the higher education reform package was the expansion of the system, with increased opportunities for participation, particularly by young people, and greatly increased resources. The 1989–90 Budget provided for additional funds and continuing expansion through the 1990–92 triennium. In 1990 the Government provided funding for an additional 5,800 students in higher education.

Pre-school Education

All States and Territories except Western Australia 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. 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 generally fall outside the compulsory stage of education, over two-thirds of students remain at school until Year 11 and over half remain until Year 12.

Non-government schools

All children between the prescribed ages must attend either a government school or some other recognised educational institution. The majority of Australian children (3,031,387 in 1989) attend government schools. In 1989 27.6 per cent of students (837,032) attended non-government schools. 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

Major responsibility for funding government schools lies with State Governments which provide about 90 per cent of schools' running costs. The Commonwealth contribution represents about 10 per cent. The Commonwealth is the major source of public funding for non-government schools, providing about 65 per cent against the States' 35 per cent.

In 1985 the Commonwealth introduced a funding plan which provides stability and long term security, by means of significant increases to both sectors, over an eight year period to 1992. Grants for the second four years, 1989–1992, were included in legislation introduced at the end of 1988.

The Commonwealth Government has announced arrangements to apply for recurrent funding for non-government schools beyond 1992. These arrangements build on the features of the present successful scheme and will provide real increases for the neediest schools and maintain funding for schools in other categories.

Progress has been made towards increased public accountability for schools. All Ministers have agreed to the production of an annual national report on schooling which will inform the Commonwealth Parliament and the general public about the achievements of Australian schools. The report will include information on school curriculum, participation and retention rates, student achievements, the application of financial resources in schools, and other topics of national interest.

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. An estimated 149,000 secondary students aged 16 and over from low income families received assistance in 1989 under AUSTUDY. During 1989 approximately 14,500 children were given assistance under the Assistance for Isolated Children (AIC) Scheme, and 23,800 under ABSTUDY (Schooling).

School organisation and operation

Primary schooling provides a general elementary program lasting for seven or eight 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 teachers' 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, typing, 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.

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 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, higher education institutions and other post-school institutions. The latter include non-government teachers colleges and a few single purpose institutions such as the Australian Film, Television and Radio School, the Australian Maritime College and the National Institute of Dramatic Art.

Students' eligibility for entry to higher education institutions 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 provisions for children in isolated areas. Schools of the Air operate in New South Wales, South Australia, Queensland, Western Australia and the Northern Territory.

Children of some Aboriginal groups in remote areas of the Northern Territory who have moved away from larger centres onto small decentralised communities called outstations or homeland centres, receive schooling from 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 children's special needs. The

Commonwealth Government provides funds to State and non-government authorities and community groups to assist in the provision of services and 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 groups such as Aboriginals, have residential hostels close by. The Commonwealth is providing additional funding for two years from 1989 to assist government and non-government authorities to refurbish hostels for rural students undertaking secondary education.

The AIC Scheme is designed to assist the families of children who, because of geographic isolation or disability, must live away from home to attend school, study by correspondence, or live in a second home to go to school. In certain cases assistance may also be available for students from itinerant families.

ABSTUDY (Schooling) is part of the Commonwealth Government's program to encourage and assist Aboriginal and Torres Strait Islanders to take full advantage of the educational opportunities available to other Australians. It provides assistance to Aboriginal and Torres Strait Islanders who are undertaking full-time secondary studies, or who are 14 years of age on 1 January of the year of study and go to primary school.

SCHOOLS, STUDENTS AND TEACHING STAFF BY CATEGORY OF SCHOOL (AND NON-GOVERNMENT AFFILIATION), AUSTRALIA, JULY 1989

	Government schools	*Non-government schools*				*All schools*
		Anglican	*Catholic*	*Other*	*Total(a)*	
Number of schools	7,513	116	1,720	687	2,523	10,036
Number of students—						
Males	1,123,993	42,783	297,837	79,568	420,188	1,544,181
Females	1,070,362	36,519	295,788	84,537	416,844	1,487,206
Persons	**2,194,355**	**79,302**	**593,625**	**164,105**	**837,032**	**3,031,387**
FTE of teaching staff*(b)*—						
Males	59,671	2,719	11,456	4,769	18,944	78,615
Females	87,286	3,171	22,437	7,059	32,677	119,953
Persons	**146,957**	**5,891**	**33,892**	**11,828**	**51,611**	**198,568**

(a) Includes special schools administered by government authorities other than the State Departments of Education in Victoria and Western Australia. *(b)* Full-time teaching staff plus full-time equivalent of part-time teaching staff.

STUDENTS BY CATEGORY OF SCHOOL AND SEX, AUSTRALIA, JULY

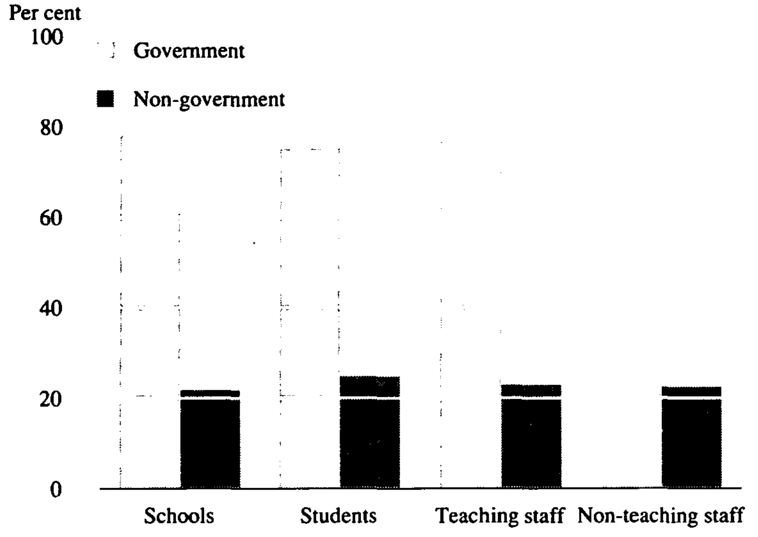
	1984	*1985*	*1986*	*1987*	*1988*	*1989*
			GOVERNMENT SCHOOLS			
Males	1,162,979	1,147,561	1,134,704	1,128,722	1,128,011	1,123,993
Females	1,097,572	1,083,272	1,073,097	1,068,020	1,069,692	1,070,362
Persons	*2,260,551*	*2,230,833*	*2,207,801*	*2,196,742*	*2,197,703*	2,194,355
			NON-GOVERNMENT SCHOOLS			
Males	379,652	389,385	397,705	404,723	413,253	420,188
Females	377,400	385,951	395,883	403,418	411,373	416,844
Persons	*757,052*	*775,336*	*793,588*	*808,141*	*824,626*	837,032
			ALL SCHOOLS			
Males	1,542,631	1,536,946	1,532,409	1,533,445	1,541,264	1,544,181
Females	1,474,972	1,469,223	1,468,980	1,471,438	1,481,065	1,487,206
Persons	**3,017,603**	**3,006,169**	**3,001,389**	**3,004,883**	**3,022,329**	**3,031,387**

NUMBER OF FULL-TIME STUDENTS BY CATEGORY OF SCHOOL (AND NON-GOVERNMENT AFFILIATION), SEX AND LEVEL/YEAR OF EDUCATION, AUSTRALIA, JULY

Level /Year of education	Government schools	Non-government schools(a)				All schools		
		Anglican	Catholic	Other	Total	Males	Females	Persons
			1988					
Primary—								
Pre-Year 1(b)	129,011	1,950	37,445	6,673	46,068	90,069	85,010	175,079
Year 1	192,986	2,330	48,440	8,786	59,556	130,010	122,532	252,542
Year 2	183,728	2,408	47,559	8,548	58,515	124,483	117,760	242,243
Year 3	175,576	2,727	46,926	8,425	58,078	119,942	113,712	233,654
Year 4	175,286	2,891	46,567	8,402	57,860	119,242	113,904	233,146
Year 5	174,711	3,872	46,991	9,109	59,972	120,138	114,545	234,683
Year 6	176,178	4,342	47,046	9,626	61,014	121,704	115,488	237,192
Year 7(c)	67,361	1,663	13,796	3,436	18,895	44,122	42,134	86,256
Ungraded	8,254	9	186	1,616	1,811	6,129	3,936	10,065
Total primary	*1,283,091*	*22,192*	*334,956*	*64,621*	*421,769*	*875,839*	*829,021*	*1,704,860*
Secondary—								
Year 7(d)	105,078	6,317	34,120	10,116	50,553	79,871	75,760	155,631
Year 8	174,073	9,755	50,065	16,419	76,239	128,478	121,834	250,312
Year 9	180,900	9,946	50,375	16,441	76,762	132,208	125,454	257,662
Year 10	180,224	9,853	48,754	16,183	74,790	129,308	125,706	255,014
Year 11	144,456	10,067	39,653	15,895	65,615	102,762	107,309	210,071
Year 12	105,841	8,742	32,800	14,086	55,628	76,322	85,147	161,469
Ungraded	5,834	24	70	554	648	3,773	2,709	6,482
Total secondary	*896,406*	*54,704*	*255,837*	*89,694*	*400,235*	*652,722*	*643,919*	*1,296,641*
Special(e)—								
Primary	2,944	11	246	388	645	2,284	1,305	3,589
Secondary	2,517	20	233	264	517	1,895	1,139	3,034
Not identifiable as primary or secondary	12,745	—	76	1,384	1,460	8,524	5,681	14,205
Total special	*18,206*	*31*	*555*	*2,036*	*2,622*	*12,703*	*8,125*	*20,828*
Total students	**2,197,703**	**76,927**	**591,348**	**156,351**	**824,626**	**1,541,264**	**1,481,065**	**3,022,329**
			1989					
Primary—								
Pre-Year 1(b)	132,560	1,994	37,477	7,313	46,784	91,944	87,400	179,344
Year 1	196,055	2,472	49,380	9,672	61,524	132,925	124,654	257,579
Year 2	189,886	2,541	48,452	9,221	60,214	128,154	121,946	250,100
Year 3	182,619	2,959	47,875	9,298	60,132	124,466	118,285	242,751
Year 4	175,748	3,250	47,244	9,199	59,693	120,775	114,666	235,441
Year 5	174,789	3,943	47,095	9,638	60,676	120,401	115,064	235,465
Year 6	174,615	4,640	47,176	10,218	62,034	121,296	115,353	236,649
Year 7(c)	67,605	1,740	13,768	3,734	19,242	44,585	42,262	86,847
Ungraded	8,555	9	156	1,678	1,843	6,318	4,080	10,398
Total primary	*1,302,432*	*23,548*	*338,623*	*69,971*	*432,142*	*890,864*	*843,710*	*1,734,574*
Secondary—								
Year 7(d)	102,354	6,291	33,548	10,180	50,019	78,144	74,229	152,373
Year 8	168,534	10,077	48,993	16,926	75,996	125,346	119,184	244,530
Year 9	174,273	10,095	49,506	16,790	76,391	128,314	122,350	250,664
Year 10	173,636	10,170	48,926	16,879	75,975	126,969	122,642	249,611
Year 11	138,448	10,020	39,720	16,243	65,983	99,115	105,316	204,431
Year 12	110,313	9,052	33,728	14,752	57,532	78,830	89,015	167,845
Ungraded	6,846	19	79	571	669	4,399	3,116	7,515
Total secondary	*874,404*	*55,724*	*254,500*	*92,341*	*402,565*	*641,117*	*635,852*	*1,276,969*
Special(e)—								
Primary	3,183	12	222	434	668	2,439	1,412	3,851
Secondary	2,749	18	251	212	481	2,057	1,173	3,230
Not identifiable as primary or secondary	11,587	—	29	1,147	1,176	7,704	5,059	12,763
Total special	*17,519*	*30*	*502*	*1,793*	*2,325*	*12,200*	*7,644*	*19,844*
Total students	**2,194,355**	**79,302**	**593,625**	**164,105**	**837,032**	**1,544,181**	**1,487,206**	**3,031,387**

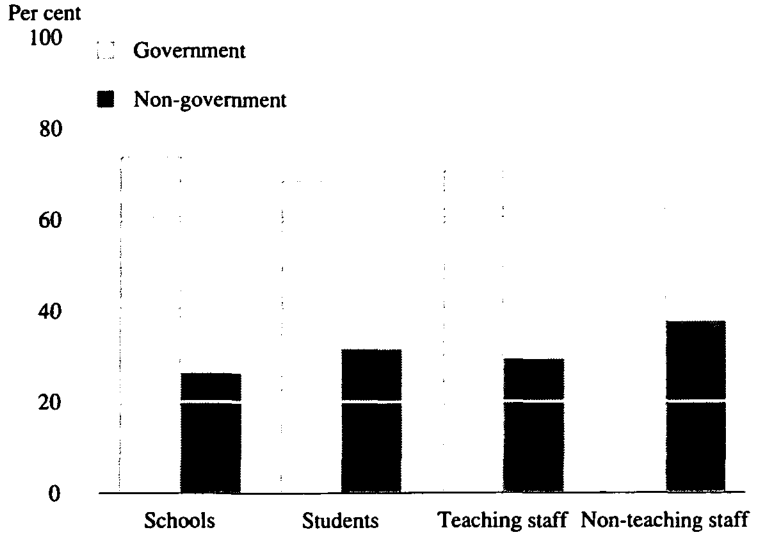
(a) Includes full-time students attending special schools administered by government authorities other than the State Departments of Education. *(b)* Pre-Year 1 comprises Kindergarten in NSW and ACT, Preparatory in Vic., and Tas., Reception in SA, and Transition in NT. *(c)* Year 7 is primary education in Qld, SA, WA, and NT. *(d)* Year 7 is secondary education in NSW, Vic., Tas., and the ACT. *(e)* Attending special schools.

PRIMARY SCHOOLS, FULL-TIME STUDENTS AND FTE(a) OF SCHOOL STAFF BY CATEGORY OF SCHOOL, AUSTRALIA, JULY 1989



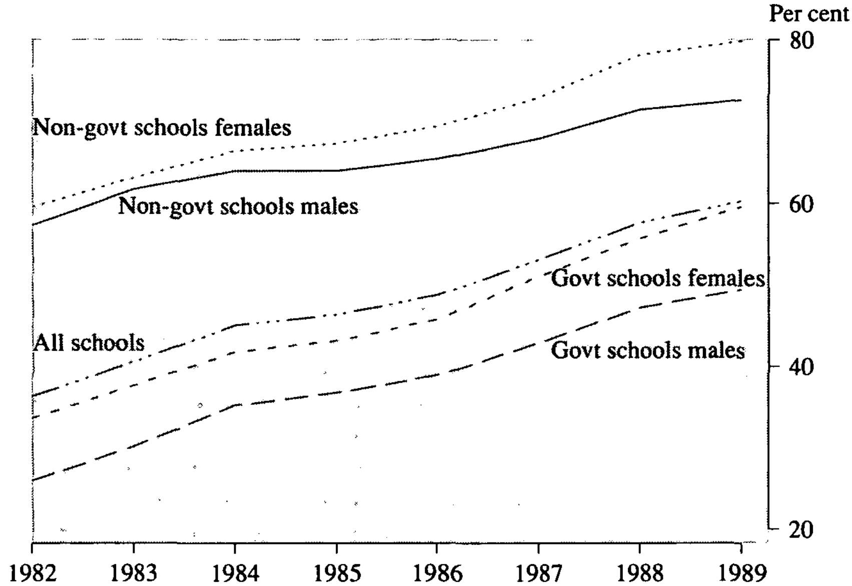
(a) Full-time teaching staff plus full-time equivalents of part-time teaching staff.
NOTE: Combined Primary/Secondary schools are not included in the above graph; however, the associated students and staff are included. Special schools and their associated students and staff are not included in the above graph.

SECONDARY SCHOOLS, FULL-TIME STUDENTS AND FTE(a) OF SCHOOL STAFF BY CATEGORY OF SCHOOL, AUSTRALIA, JULY 1989



(a) Full-time teaching staff plus full-time equivalents of part-time teaching staff.
NOTE: Combined Primary/Secondary schools are not included in the above graph; however, the associated students and staff are included. Special schools and their associated students and staff are not included in the above graph.

APPARENT RETENTION RATES OF SCHOOL STUDENTS TO YEAR 12 BY CATEGORY OF SCHOOL AND SEX, AUSTRALIA, JULY, 1982-1989



The apparent retention rate is the percentage of students of a given cohort group who continued to a particular level/year of education. In the above diagram, apparent retention rates have been calculated for students who continued to Year 12 from their respective cohort group at the commencement of their secondary schooling.

Care should be exercised in the interpretation of apparent retention rates since a range of factors affecting their calculation have not been taken into account. At the Australia level these include students repeating a year of education, migration and other net changes to the school population.

Comparisons between government and non-government schools must be made with caution because of the net transfer of students from government to non-government schools which tends to inflate the non-government school retention rates and reduce the government school rates. International comparisons are another area where structural differences must be taken into account.

Apparent retention rates are an important measure of performance of education systems and related government policies. The Commonwealth Department of Employment, Education and Training has set a national apparent retention rate target of 65 per cent to Year 12 by 1992.

Tertiary Education

Tertiary education is provided in higher education institutions and in technical and further education institutions. Higher education institutions are self-governing and are established under State legislation. Technical and further education institutions operate as part of State-wide TAFE systems.

At the national level, the Commonwealth Government, through the Department of Employment, Education and Training, 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' within this chapter.

Technical and further education—TAFE

The major part of technical and further education in Australia is provided in government administered colleges, or centres of technical and further education. There is also some TAFE provision in some higher education institutions, 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 Department of Employment, Education and Training.

Government TAFE institutions offer an extremely wide range of vocational and non-vocational courses. Courses are available at pre-vocational, traineeship, trade technician and para-professional levels. Programs provide entry-level training, 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 supplement previous training. In addition, adult education courses are available for personal interest, leisure or general enrichment purposes.

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 Department of Employment, Education and Training conducts an annual TAFE statistical collection. A key feature of the collection is its emphasis on the individual *student* as the unit of reporting rather than on enrolment.

TECHNICAL AND FURTHER EDUCATION: STUDENTS (STREAMS 2100–4500) BY SEX, TYPE OF ATTENDANCE AND AGE GROUP, AUSTRALIA, 1988

(*Source:* **Department of Employment, Education and Training 'Selected TAFE Statistics, 1988'**)

	Males			*Females*			*Persons*		
Age group (years)	*Full-time*	*Part-time*	*Total*	*Full-time*	*Part-time*	*Total*	*Full-time*	*Part-time*	*Total*
16 & under	6,477	27,961	34,438	4,981	20,786	25,767	11,458	48,747	60,205
17	7,560	31,829	39,389	5,734	16,968	22,702	13,294	48,797	62,091
18	8,119	37,130	45,249	6,849	19,599	26,448	14,968	56,729	71,697
19	5,583	33,983	39,566	4,486	17,361	21,847	10,069	51,344	61,413
19 & under	*27,739*	*130,903*	*158,642*	*22,050*	*74,714*	*96,764*	*49,789*	*205,617*	*255,406*
20–24	9,468	86,552	96,020	7,738	61,814	69,552	17,206	148,366	165,572
25–29	3,604	60,417	64,021	3,648	51,319	54,967	7,252	111,736	118,988
30–39	3,358	84,776	88,134	5,547	90,144	95,691	8,905	174,920	183,825
40–49	1,033	40,186	41,219	2,732	54,454	57,186	3,765	94,640	98,405
50–59	318	14,472	14,790	677	20,722	21,399	995	35,194	36,189
60–64	60	3,244	3,304	128	5,592	5,720	188	8,836	9,024
65 & over	169	5,137	5,306	162	7,830	7,992	331	12,967	13,298
Not stated	1,014	31,099	32,113	1,623	37,155	38,778	2,637	68,254	70,891
Total	**46,763**	**456,786**	**503,549**	**44,305**	**403,744**	**448,049**	**91,068**	**860,530**	**951,598**

TECHNICAL AND FURTHER EDUCATION: ALL STUDENTS BY STREAM AND FIELD OF STUDY, AUSTRALIA 1988

(*Source:* **Department of Employment, Education and Training 'Selected TAFE Statistics, 1988'**)

Stream	*Applied science*	*Art & design*	*Building*	*Business studies*	*Engineering*	*Rural & horti-cultural*	*Music*	*Para-medical*	*Industrial services*	*Personal services*	*General studies*	*Net*
1000 Recreation, leisure	35,428	24,813	8,684	13,708	5,084	3,850	4,488	2,767	19,019	41,178	381,463	532,753
2100 Basic employment skills	661	3,568	1,919	4,798	9,432	728	36	174	1,981	87,257	43,261	150,642
2200 Educational preparation	1,018	2,793	172	2,363	3,850	223	300	687	27,931	15,977	42,109	95,999
3100 Operatives: initial	1,810	10,413	12,986	83,349	26,238	13,671	116	2,342	16,946	21,229	10,861	194,846
3211 Recognised trades: part exempt	0	41	2,246	0	6,860	110	0	7	1,003	762	1,320	12,313
3212 Recognised trades: complete	125	383	29,565	0	61,790	6,063	0	409	13,491	11,989	500	124,077
3221 Other skills: part exempt	5,629	3,420	203	7,969	346	147	0	0	359	367	509	18,918
3222 Other skills: complete	7,089	12,885	4,886	45,814	15,187	8,246	415	582	15,029	6,821	12,987	124,718
3300 Trade technician/supervisory	694	2,459	5,645	54,172	13,105	4,371	129	495	29,195	3,757	1,211	114,462
3400 Paraprofessional technician	3,740	2,881	4,455	25,537	10,778	832	419	1,971	1,311	2,313	9,455	62,496
3500 Paraprofessional higher technician	1,874	2,965	2,478	31,818	14,414	6,507	179	1,269	732	1,794	1,102	64,916
3600 Professional	38	372	0	189	159	5	114	102	0	245	831	2,051
4100 Operatives: post initial	122	67	496	5,035	2,947	946	0	138	1,395	3,057	1,254	15,437
4200 Trades/other skills: post initial	466	3,356	3,877	27,256	24,629	11,034	32	329	5,921	5,769	5,699	87,834
4300 Trade tech./super.: post initial	98	182	190	3,434	2,279	52	0	741	662	304	503	8,423
4400 Paraprof. tech.: post initial	59	10	271	60	277	497	0	19	140	14	48	1,395
4500 Paraprof. high. tech.: post initial	294	253	165	977	932	78	102	311	1,148	211	711	5,146
Total net streams 2100–4500 (a)	*22,130*	*43,128*	*66,514*	*270,875*	*173,477*	*51,575*	*939*	*9,142*	*112,634*	*153,829*	*113,126*	*951,598*
Total net all streams	**58,406**	**68,155**	**75,212**	**285,944**	**180,149**	**55,523**	**5,797**	**12,062**	**131,110**	**194,318**	**500,743**	**1,482,826**

(*a*) The sum of the stream of study components does not add up to the total as students enrolled in two or more streams have only been counted once in the total.

TECHNICAL AND FURTHER EDUCATION: DUTY HOURS OF TEACHING STAFF ('000) AND FULL-TIME TEACHING STAFF NUMBERS BY TYPE OF APPOINTMENT, AND STATE, 1988

(*Source:* Department of Employment, Education and Training 'Selected TAFE Statistics, 1988')

Type of appointment	*NSW*	*Vic.*	*Qld*	*WA*	*SA*	*Tas.*	*NT*	*ACT*	*Aust.*
Full-time									
Teaching hours	2,790.5	3,160.0	1,345.5	939.8	879.8	276.8	146.1	197.5	9,736.0
Non-teaching hours	4,197.0	3,534.0	1,705.7	596.5	1,520.5	386.5	258.9	342.3	12,541.4
Total duty hours	*6,987.5*	*6,694.0*	*3,051.2*	*1,536.3*	*2,400.3*	*663.3*	*405.0*	*539.8*	*22,277.4*
Number of Staff	6,064.0	4,395.0	2,684.0	1,640.0	1,848.0	539.0	311.0	421.0	17,902.0
Part-time									
Teaching hours	2,608.5	820.4	621.2	398.6	354.8	185.0	60.2	105.2	5,153.9
Non-teaching hours	143.3	411.1	84.0	8.8	2.4	12.1	19.9	7.3	688.9
Total duty hours	*2,751.8*	*1,231.5*	*705.2*	*407.4*	*357.2*	*197.1*	*80.1*	*112.5*	*5,842.8*
All teaching staff									
Teaching hours	5,399.0	3,980.4	1,966.7	1,338.4	1,234.6	461.8	206.3	302.7	14,889.9
Non-teaching hours	4,340.3	3,945.1	1,789.7	605.3	1,522.9	398.6	278.8	349.6	13,230.3
Total duty hours	**9,739.3**	**7,925.5**	**3,756.4**	**1,943.7**	**2,757.5**	**860.4**	**485.1**	**652.3**	**28,120.2**

Higher education

Higher education institutions normally operate over three terms or two semesters, beginning from early to late February or March and running to mid December, depending on the institution. Students commencing courses will have completed a full secondary education, or will have demonstrated that they have a high probability of successfully completing a course. There is keen demand for places at many institutions and quotas are often placed on new enrolments.

Higher education institutions are funded by the Commonwealth under the *Higher Education Funding Act 1988*. In 1990 expenditure on higher education totalled approximately $3.4 billion. Students are required to contribute to the cost of their education through the Higher Education Contribution Scheme (HECS). Under the Scheme students can pay their contribution up-front or defer payment for collection through the taxation system. In 1990 there was an annual course contribution of $1,882.

The basic undergraduate course at most institutions is a bachelor degree course of three or four years duration. At some institutions, courses may also be offered at the diploma or associate diploma level. Most institutions also offer postgraduate level study. One to two years of full-time postgraduate study is required for a masters degree and three to five years for a doctoral degree. Postgraduate diplomas are offered in some disciplines.

All institutions provide full-time and part-time courses. In addition some institutions offer 'sandwich' courses which provide a period of full-time study with associated periods of full-time employment. External studies have been offered by a large number of institutions in the past. In 1989 resources were concentrated into eight new Distance Education Centres.

In 1989 62 per cent of students were enrolled in full-time study, 27 per cent in part-time study and 11 per cent in external studies.

Higher education institutions offer a great variety of courses embracing such areas as agriculture, architecture, arts, business, dentistry, economics, education, engineering, health, law, medicine, music, science and veterinary science.

HIGHER EDUCATION: STUDENTS BY AGE GROUP AND SEX
(*Source:* Department of Employment, Education and Training 'Selected Higher Education Statistics, 1989')

	1984	*1985*	*1986*	*1987*	*1988*	*1989*
19 and under						
Males	48,301	49,617	52,165	56,099	61,068	66,531
Females	50,591	54,223	59,198	65,741	72,985	81,892
Persons	98,892	103,840	111,363	121,840	134,053	148,423
20–24						
Males	61,252	61,377	61,914	60,759	62,896	65,482
Females	46,256	47,956	51,123	52,558	56,899	61,182
Persons	107,508	109,333	113,037	113,317	119,795	126,664
25–29						
Males	31,034	30,669	30,869	29,251	29,327	28,630
Females	20,828	21,999	23,443	23,088	24,768	25,321
Persons	51,862	52,668	54,312	52,339	54,095	53,951
30 and over						
Males	49,858	51,970	54,464	50,022	52,333	50,642
Females	48,317	51,478	56,083	55,733	60,249	61,396
Persons	98,175	103,448	110,547	105,755	112,582	112,038
Age not stated						
Males	445	421	436	253	150	0
Females	491	306	273	230	175	0
Persons	936	727	709	483	325	0
Total						
Males	*190,890*	*194,054*	*199,848*	*196,384*	*205,774*	*211,285*
Females	*166,483*	*175,962*	*190,120*	*197,350*	*215,076*	*229,791*
Persons	*357,373*	*370,016*	*389,968*	*393,734*	*420,850*	*441,076*

HIGHER EDUCATION: COURSE COMPLETIONS BY LEVEL OF COURSE AND SEX
(*Source:* Department of Employment, Education and Training 'Selected Higher Education Statistics, 1989')

	1981	*1984*	*1985*	*1986*	*1987*	*1988*
Higher degree						
Research						
Males	1,312	1,108	1,216	1,276	1,257	1,455
Females	417	374	424	516	476	634
Persons	1,729	1,482	1,640	1,792	1,733	2,089
Coursework						
Males	1,126	1,910	1,866	1,940	1,622	1,944
Females	435	770	821	968	900	1,042
Persons	1,561	2,680	2,687	2,908	2,522	2,986
Other						
Postgraduate degree						
Males	4,388	5,062	5,693	5,719	5,982	6,707
Females	4,965	5,693	6,149	6,637	7,135	8,980
Persons	9,353	10,755	11,842	12,356	13,117	15,687
Bachelor degree						
Males	20,929	22,782	23,113	24,347	24,372	24,895
Females	17,172	19,965	21,186	22,886	24,845	26,317
Persons	38,101	42,747	44,299	47,233	49,217	51,212
Other non-degree						
Males	5,639	4,482	4,620	4,879	4,300	4,705
Females	9,863	8,141	8,347	8,613	9,368	10 180
Persons	15,502	12,623	12,967	13,492	13,668	14,885
Total						
Males	*33,394*	*35,344*	*36,508*	*38,161*	*37,533*	*39,706*
Females	*32,852*	*34,943*	*36,927*	*39,620*	*42,724*	*47,153*
Persons	*66,246*	*70,287*	*73,435*	*77,781*	*80,257*	*86,859*

HIGHER EDUCATION: ALL STUDENTS BY SEX, BY LEVEL OF COURSE, AUSTRALIA

(*Source:* **Department of Employment, Education and Training 'Selected Higher Education Statistics, 1989'**)

	Higher doctorate	*Ph.D*	*Masters research*	*Masters course-work*	*Post-graduate quali-fication*	*Post-graduate diploma*	*Post-graduate certi-ficate*	*Post-graduate bachelor*	*Bachelor honours*	*Bachelor pass*	*Total under-graduate bachelor*	*Diploma*	*Associate diploma*	*Other*	*Total*
Males															
1984	151	5,270	3,745	8,421	850	15,312	0	949	n.a.	n.a.	128,369	10,474	13,363	3,986	190,890
1985*(a)*	156	5,409	3,683	8,572	865	16,173	48	916	2,180	128,731	130,911	9,797	13,673	3,851	194,054
1986*(a)*	173	5,540	3,685	9,055	800	16,786	44	993	2,057	133,358	135,415	9,887	13,825	3,645	199,848
1987*(a)*	176	5,618	3,990	8,224	909	15,671	39	894	2,263	134,624	136,887	8,945	12,420	2,611	196,384
1988*(a)*	148	5,816	4,110	8,979	920	16,279	37	807	2,496	141,937	144,433	9,181	12,248	2,816	205,774
1989*(a)*	119	5,485	3,861	9,564	2,052	14,111	267	1,226	2,676	150,450	153,126	8,341	11,199	1,933	211,285
Females															
1984	16	2,048	2,036	4,101	585	13,794	0	1,307	n.a.	n.a.	105,999	24,046	8,520	4,031	166,483
1985*(a)*	24	2,216	2,064	4,484	658	14,571	18	1,436	1,879	109,565	111,444	25,780	9,219	4,048	175,962
1986*(a)*	21	2,330	2,147	4,943	652	15,897	24	1,599	1,895	118,808	120,703	28,071	9,666	4,067	190,120
1987*(a)*	24	2,493	2,266	5,177	684	15,981	26	1,541	2,493	124,797	127,290	29,606	9,231	3,031	197,350
1988*(a)*	33	2,747	2,435	5,957	723	17,476	38	1,523	2,699	136,329	139,028	32,191	8,922	4,003	215,076
1989*(a)*	38	2,783	2,465	6,417	2,596	16,061	231	2,718	2,760	149,820	152,580	33,057	8,954	1,891	229,791
Persons															
1984	167	7,318	5,781	12,522	1,435	29,106	0	2,256	n.a.	n.a.	234,368	34,520	21,883	8,017	357,373
1985*(a)*	180	7,625	5,747	13,056	1,523	30,744	66	2,352	4,059	238,296	242,355	35,577	22,892	7,899	370,016
1986*(a)*	194	7,870	5,832	13,998	1,452	32,683	68	2,592	3,952	252,166	256,118	37,958	23,491	7,712	389,968
1987*(a)*	200	8,111	6,256	13,401	1,593	31,652	65	2,435	4,756	259,421	264,177	38,551	21,651	5,642	393,734
1988*(a)*	181	8,563	6,545	14,936	1,643	33,755	75	2,330	5,195	278,266	283,461	41,372	21,170	6,819	420,850
1989*(a)*	157	8,268	6,326	15,981	4,648	30,172	498	3,944	5,436	300,270	305,706	41,398	20,153	3,824	441,076

(a) Includes State-funded basic nursing students who would previously have been trained in hospitals.

HIGHER EDUCATION: ALL STUDENTS BY TYPE OF ENROLMENT AND SEX

(*Source:* **Department of Employment, Education and Training 'Selected Higher Education Statistics, 1989'**)

Year	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*
Internal						
Full-time						
Males	102,148	104,276	107,342	114,739	122,433	129,437
Females	93,639	100,063	107,903	119,415	130,980	142,664
Persons	195,787	204,339	215,245	234,154	253,413	272,101
Part-time						
Males	66,396	66,407	67,619	59,475	60,606	59,668
Females	51,924	53,674	57,585	54,374	58,647	60,898
Persons	118,320	120,081	125,204	113,849	119,253	120,566
External						
Males	22,346	23,371	24,887	22,170	22,735	22,180
Females	20,920	22,225	24,632	23,561	25,449	26,229
Persons	43,266	45,596	49,519	45,731	48,184	48,409
Total						
Males	*190,890*	*194,054*	*199,848*	*196,384*	*205,774*	*211,285*
Females	*166,483*	*175,962*	*190,120*	*197,350*	*215,076*	*229,791*
Persons	*357,373*	*370,016*	*389,968*	*393,734*	*420,850*	441,076

The system of tuition in higher education institutions 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.

Many institutions 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.

Programs Spanning the Educational Sectors

The Government spent more than $947 million on student assistance in 1989–90. This was the fourth year of AUSTUDY, the Commonwealth Government's means-tested and non-competitive scheme of financial assistance to secondary and tertiary students aged 16 years and above. Since 1988, maximum allowance rates for students aged 16–20 have been aligned with benefits for unemployed people of the same age, and all rates are indexed annually. AUSTUDY is a major element in the Commonwealth Government's drive to increase participation in full-time education at the upper secondary and tertiary levels. New, higher AUSTUDY rates, equal to adult unemployment benefits, were introduced in 1989 for specially disadvantaged groups as a first step in a gradual process of alignment of maximum rates for people aged 21 and over or with dependents.

STUDENT ASSISTANCE SCHEMES, 1989–90

Scheme	*Number of students*	*Assistance $'000*
AUSTUDY Tertiary	149,056	483,994
AUSTUDY Secondary	162,774	314,244
AUSTUDY Adult Secondary	7,699	25,085
ABSTUDY (Schooling)	27,251	40,606
ABSTUDY (Tertiary)	15,050	42,327
Assistance for Isolated Children	13,274	14,103
English as a Second Language— Living Allowances	1,110	3,198

COURSES COMPLETED BY ALL STUDENTS, LEVEL OF COURSE AND FIELD OF STUDY, 1988

(*Source*: Department of Employment, Education and Training 'Selected Higher Education Statistics, 1989')

Level of course	*Agri-culture, animal husbandry*	*Archi-tecture, building*	*Arts, humanities and social sciences*	*Business, admin-istration, economics*	*Education*	*Engineering and surveying*	*Health*	*Law, legal studies*	*Science*	*Veterinary science*	*Non-award courses*	*Total*
Higher doctorate	0	0	1	0	0	0	12	0	5	0	0	18
Ph.D.	78	23	348	127	156	144	104	23	557	49	0	1,609
Master's												
Research	50	8	147	38	67	100	52	20	161	4	0	647
Coursework	29	63	641	888	552	221	131	87	161	0	0	2,773
Total	*79*	*71*	*788*	*926*	*619*	*321*	*183*	*107*	*322*	*4*	*0*	*3,420*
Postgraduate												
Preliminary or qualifying	31	9	119	153	399	34	69	1	130	0	0	945
Diploma	71	134	1,406	1,472	5,698	358	629	219	927	10	0	10,924
Certificate	16	0	174	123	1,423	0	57	609	48	0	0	2,450
Bachelor	0	35	221	0	1,022	1	17	252	0	0	0	1,548
Total	*118*	*178*	*1,920*	*1,748*	*8,542*	*393*	*772*	*1,081*	*1,105*	*10*	*0*	*15,867*
Bachelor's degree												
Honours	6	0	1,125	191	16	181	57	44	1,051	24	0	2,695
Pass	655	1,527	13,601	9,661	7,412	3,476	4,206	1,726	7,633	227	0	50,124
Total	*661*	*1,527*	*14,726*	*9,852*	*7,428*	*3,657*	*4,263*	*1,770*	*8,684*	*251*	*0*	*52,819*
Diploma	20	4	305	29	6,109	18	3,143	0	107	0	39	9,774
Associate diploma	482	45	1,220	668	93	447	357	100	644	0	0	4,056
Other award course	0	9	118	137	759	0	94	0	0	0	0	1,117
Enabling course	0	0	0	0	0	0	0	0	0	0	0	0
Non-award course	0	0	0	0	0	0	0	0	0	0	9	9
Total	**1,438**	**1,857**	**19,426**	**13,487**	**23,706**	**4,980**	**8,928**	**3,081**	**11,424**	**314**	**48**	**88,689**

HIGHER EDUCATION: COMMENCING STUDENTS BY LEVEL OF COURSE AND FIELD OF STUDY, 1989

(*Source:* Department of Employment, Education and Training 'Selected Higher Education Statistics, 1989')

Level of course	*Agri-culture, animal husbandry*	*Archi-tecture, building*	*Arts, humanities and social sciences*	*Business admin-istration, economics*	*Education*	*Engineering and surveying*	*Health*	*Law, legal studies*	*Science*	*Veterinary science*	*Non-award courses*	*Total*
Higher doctorate	0	0	2	0	0	1	49	13	1	0	0	66
Ph.D	72	14	499	95	164	236	241	21	683	27	0	2,052
Masters												
Research	139	53	751	112	232	341	230	76	590	26	0	2,550
Coursework	49	280	1,451	2,351	1,504	509	575	382	432	20	0	7,553
Total	*188*	*333*	*2,202*	*2,463*	*1,736*	*850*	*805*	*458*	*1,022*	*46*	*0*	*10,103*
Postgraduate												
Qualifying or preliminary	70	67	556	418	999	144	209	1	388	8	0	2,860
Diploma	183	316	2,391	3,510	7,677	840	1,135	462	2,025	11	0	18,550
Certificate	0	0	0	27	60	0	0	386	0	0	0	473
Bachelor	0	44	415	4	1,283	3	49	202	29	0	0	2,029
Total	*253*	*427*	*3,362*	*3,955*	*10,019*	*987*	*1,393*	*1,051*	*2,442*	*19*	*0*	*23,912*
Bachelor degree												
Honours	3	0	307	32	58	5	47	10	205	6	0	673
Pass	1,471	2,504	31,515	28,890	11,054	8,889	7,549	2,735	19,161	346	0	114,114
Total	*1,474*	*2,504*	*31,822*	*28,922*	*11,112*	*8,894*	*7,596*	*2,745*	*19,366*	*352*	*0*	*114,787*
Diploma	0	28	314	0	8,889	31	7,971	0	129	0	0	17,406
Associate diploma	1,092	73	2,470	2,056	527	861	669	208	1,608	0	0	9,564
Undergraduate certificate	0	0	0	0	0	0	0	0	0	0	0	0
Other award course	63	0	242	441	95	34	28	5	110	0	0	1,291
Non-award course	0	0	42	22	3	0	0	0	13	0	2,163	1,921
Total	**3,142**	**3,379**	**40,955**	**37,958**	**32,545**	**11,894**	**18,752**	**4,496**	**25,374**	**444**	**2,163**	**181,102**

HIGHER EDUCATION: ALL STUDENTS BY LEVEL OF COURSE AND FIELD OF STUDY, 1989

(*Source:* Department of Employment, Education and Training 'Selected Higher Education Statistics, 1989')

Level of course	*Agri-culture, animal husbandry*	*Archi-tecture, building*	*Arts, humanities and social sciences*	*Business admin-istration, economics*	*Education*	*Engineering and surveying*	*Health*	*Law, legal studies*	*Science*	*Veterinary science*	*Non-award courses*	*Total*
Higher doctorate	0	0	2	0	0	1	136	13	5	—	0	157
Ph.D	350	70	2,064	339	544	902	1,033	70	2,759	137	0	8,268
Masters												
Research	342	130	1,808	260	652	835	575	201	1,465	58	0	6,326
Coursework	77	504	2,933	5,055	3,541	1,090	1,091	747	911	32	0	15,981
Total	*419*	*634*	*4,741*	*5,315*	*4,193*	*1,925*	*1,666*	*948*	*2,376*	*90*	*0*	*22,307*
Postgraduate												
Qualifying or preliminary	99	93	859	796	1,614	213	400	2	564	9	0	4,649
Diploma	253	635	3,793	5,723	12,032	1,509	1,932	666	3,618	11	0	30,172
Certificate	0	0	0	27	68	0	0	403	0	0	0	498
Bachelor	0	90	811	6	2,512	7	50	391	77	0	0	3,944
Total	*352*	*818*	*5,463*	*6,552*	*16,226*	*1,729*	*2,382*	*1,462*	*4,259*	*20*	*0*	*39,263*
Bachelor degree												
Honours	24	17	2,755	327	157	306	93	115	1,628	14	0	5,436
Pass	4,013	7,858	80,126	74,185	28,753	25,959	23,565	8,547	45,999	1,265	0	300,270
Total	*4,037*	*7,875*	*82,881*	*74,512*	*28,910*	*26,265*	*23,658*	*8,662*	*47,627*	*1,279*	*0*	*305,706*
Diploma	7	58	1,051	10	21,846	85	17,895	0	329	0	0	41,398
Associate diploma	2,428	223	4,972	4,399	755	2,225	1,398	538	3,215	0	0	20,153
Undergraduate certificate	0	0	0	0	0	0	0	0	0	0	0	0
Other award course	63	0	268	441	100	46	28	0	115	0	0	1,403
Non-award course	0	0	53	24	4	0	0	0	20	0	2,320	2,421
Total	**7,656**	**9,678**	**101,495**	**91,592**	**72,578**	**33,178**	**48,196**	**1,1693**	**60,705**	**1,526**	**2,320**	**441,076**

The number of students assisted under AUSTUDY has increased substantially since the introduction of the scheme in 1987, from about 225,000 students in that first year it rose to over 297,000 in 1989.

Assistance for isolated children has been substantially improved, with rates of allowance and income test levels brought into line with AUSTUDY. This closer integration of the two schemes has included the transfer to AUSTUDY, from the beginning of 1989, of means-tested living away from home allowances for isolated secondary students aged 16 years and over.

Special provisions for young people unable to live at home because of exceptional and intolerable circumstances were introduced in July 1986. These provisions allow young people in such circumstances to be classified as independent, thus free from the application of the parental means test in assessing their eligibility for AUSTUDY.

The National Aboriginal and Torres Strait Islander Education Policy (AEP) was launched by the Minister for Employment, Education and Training in October 1989. The Policy is a joint commitment by the Commonwealth Government, and the State and Territory Governments in consultation with the Aboriginal community to achieve broad equity between Aboriginal people and other Australians in access, participation and outcomes at all stages of education.

The AEP is a concerted effort to address the educational needs of Aboriginal people, by cooperatively directing the strategies of the Commonwealth, the States and Territories, non-government education authorities and educational institutions at all levels to achieve:

- full involvement of Aboriginal people in educational decisions;
- equality of access to educational services;
- increased participation at all levels of education; and
- equitable and appropriate educational outcomes.

Through the AEP the Commonwealth has supplemented its recurrent and capital funding with a three year forward commitment in one consolidated program—the Aboriginal Education Strategic Initiatives Program. This has replaced all previous Commonwealth education funding programs except income support through ABSTUDY. ABSTUDY continues to provide education allowances to Aboriginal secondary and tertiary students, while the new program, Aboriginal Tutorial Assistance Scheme (ATAS), provides assistance to all levels of Aboriginal students seeking help in their accredited coursework.

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).

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 below.

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', as broadly 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.

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.

AUSTRALIA: EXPENDITURE ON EDUCATION

Description	*1982-83*	*1983-84*	*1984-85*	*1985-86*	*1986-87*	*1987-88*
			—$ million—			
Government—						
General government final consumption expenditure	7,477	8,224	8,857	9,692	10,350	10,912
Gross fixed capital expenditure	655	736	877	1,018	1,152	1,011
Increase in stocks	-1	3	—	1	2	2
Final expenditure (1)	8,132	8,963	9,734	10,712	11,503	11,926
Personal benefit payments (2)	549	663	735	826	954	1,207
Grants and advances to non-profit institutions	972	1,085	1,194	1,347	1,446	1,546
Other (3)	14	18	27	28	4	-5
Total government outlay on education	**9,666**	**10,728**	**11,689**	**12,912**	**13,907**	**14,673**
Private—						
Private final consumption expenditure	1,304	1,557	1,768	1,970	2,180	2,387
Gross fixed capital expenditure	196	117	175	224	278	312
Final expenditure (4)	1,500	1,674	1,943	2,194	2,458	2,699
Total final expenditure on education (1) + (4)	9,632	10,637	11,677	12,906	13,961	14,625
Total outlay on education (1) + (2) + (3) + (4)	10,194	11,317	12,438	13,760	14,918	15,827
Gross Domestic Product	170,240	192,383	214,270	238,637	263,249	296,921
			—per cent—			
Total government outlay as percentage of Gross Domestic Product	5.7	5.6	5.5	5.4	5.3	4.9
Total outlay on education as percentage of Gross Domestic Product	6.0	5.9	5.8	5.8	5.7	5.3
Total final expenditure on education as percentage of Gross Domestic Product	5.7	5.5	5.4	5.4	5.3	4.9
of which—						
General government final consumption expenditure	4.4	4.3	4.1	4.1	3.9	3.7
Private final consumption expenditure	0.8	0.8	0.8	0.8	0.8	0.8
Government gross fixed capital expenditure	0.4	0.4	0.4	0.4	0.4	0.3
Private gross fixed capital expenditure	0.1	0.1	0.1	0.1	0.1	0.1

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)

Government purpose classification(a)	*1982–83*	*1983–84*	*1984–85*	*1985–86*	*1986–87*	*1987–88*
Primary and secondary education	1,430.6	1,585.8	1,733.5	1,899.0	1,995.7	2,239.5
Tertiary education	2,276.6	2,500.7	2,770.7	3,000.2	3,192.5	3,438.2
University education	1,196.7	1,293.4	1,385.2	1,500.6	1,565.0	1,689.5
Other higher education	764.8	861.8	936.5	1,051.0	1,142.7	1,216.5
Technical and further education	298.0	321.7	417.5	409.3	436.6	472.7
Tertiary education, n.e.c.	17.1	23.8	31.4	39.2	48.1	59.4
Pre-school education and education not definable by level	93.7	99.0	104.8	94.4	84.6	97.4
Pre-school education	37.1	37.7	38.0	22.1	6.1	6.1
Special education	0.1	0.1	0.1	0.2	0.3	—
Other education not definable by level	56.5	61.3	66.6	72.2	78.2	91.3
Transportation of students	4.1	4.6	5.3	5.4	6.2	7.0
Education, n.e.c.	17.0	16.5	18.1	13.4	54.4	55.4
Total outlay on education	3,821.8	4,206.8	4,632.3	5,012.5	5,333.4	5,837.5
Total outlay on all purposes	50,578.2	6,022.8	67,105.3	7,443.1	79,635.8	82,816.3
			—per cent—			
Outlay on education as a percentage of total outlay	7.6	7.0	6.9	6.7	6.7	7.0

(*a*) For an explanation of the classification refer to the ABS publication *Classification Manual for Government Finance Statistics* (1217.0).

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Transition From Education to Work, Australia (6227.0)
Labour Force Status and Educational Attainment, Australia (6235.0)
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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
Publications produced by the Department of Employment, Education and Training are:
Schooling in Australia: Statistical Profile
Census of Non-government Schools
Selected Higher Education Statistics
Selected TAFE Statistics
Education Participation Rates
The Australian Research Council Awards
TAFE 1990: Commonwealth Programs and Priorities
DEET Programs: Impact on TAFE
Department of Employment, Education and Training Annual Report
Education at a Glance
Retention and Participation in Australian Schools

The annual reports of the respective State education departments also provide detailed statistical information.

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 judgements 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 Commonwealth 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 and the Australian Capital 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.

Commonwealth 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 laws apply normally only to persons who are residents of the State or Territory concerned and to things located in, 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 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 the Commonwealth, 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 Australian 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, charging 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 the Commonwealth Parliament and State Parliaments, as well as Attorneys-General acting in some instances on recommendations made by State or Australian Law Reform Commissions, and by State Supreme Courts or Federal Courts.

Law Reform Commissions have been established as statutory authorities in all Australian States (except South Australia) to undertake review of State laws, and to report findings and recommendations for the 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.) Additionally, 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 their recommendations depends upon governmental and parliamentary reaction to the proposals.

The Australian Law Reform Commission

The Australian Law Reform Commission commenced operations in 1975 under the *Law Reform Commission Act 1973*. The Commission was established to report on the review, simplification and modernisation of those laws concerning matters assigned by the Australian Constitution to the jurisdiction of the Commonwealth Parliament, and to consider proposals for the uniformity of laws of the Australian States and Territories. The Commission is required to make reports arising out of such review or consideration to the Commonwealth Attorney-General, and to make such recommendations as it thinks fit.

The Commission has the responsibility under Commonwealth legislation for reviewing Territorial law. The ACT is now self-governing. However the ACT Government wants the Commission to continue to have a law reform role in the Territory.

In undertaking its functions 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 that reference, and prepares consultative papers examining the issues for distribution among groups thought to have a special interest in the subject matter under review. Public sittings are conducted, and, in the light of submissions received, a final report which usually contains draft legislation is prepared for submission to the Commonwealth Attorney-General. The Commission makes extensive use of honorary consultants.

Since 30 June 1989, the Commission has completed reports on the following references:

- informed decisions about medical procedures; and
- guardianship and management of property.

See Year Book Australia 1990 for previous reports.

Legislation following the recommendations contained in some of these reports has been enacted. In other cases, the proposals made by the Commission are under consideration by the Commonwealth Parliament or the appropriate Commonwealth department. Current references include customs and excise, multiculturalism, federal and territory choice of law rules, children's evidence, admiralty, and community law reform.

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 Commonwealth 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.

High Court of Australia

The Australian Constitution provides that the judicial power of the Commonwealth of Australia should be vested in a 'Federal Supreme Court, to be called the High Court of Australia'. The Constitution requires that there shall be a Chief Justice and not less than two other Justices of the High Court. Today there are six other Justices. Originally, Justices were appointed for life. However, following an amendment to the Constitution in 1977, Justices appointed after that date retire at seventy years of age.

The High Court was established in 1903 and was originally based in Melbourne. However, since 1980 the High Court has been located in Canberra, although the Court continues to visit the States regularly.

The Australian Constitution vests two types of jurisdiction in the High Court: appellate, under section 73; and original, under sections 75 and 76.

Original jurisdiction is conferred by section 38 of the *Judiciary Act 1903* in respect of:

(a) matters arising directly under any treaty;

(b) 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;

(c) suits by the Commonwealth of Australia, or any person suing on behalf of the Commonwealth, against a State, or any person suing or being sued on behalf of a State;

(d) suits by a State, or any person suing on behalf of a State, against the Commonwealth of Australia or any person being sued on behalf of the Commonwealth; and

(e) matters in which a writ of mandamus or prohibition is sought against an officer of the Commonwealth of Australia or of a federal court. (However, the High Court shares some of its jurisdiction under this section with the Federal Court of Australia.)

The High Court is empowered by section 44 of the Judiciary Act to remit to another court any matters under Section 38 of that Act. In addition, the High Court is the Commonwealth Court of Disputed Returns under section 354 of the *Commonwealth Electoral Act 1918*.

The appellate jurisdiction of the High Court of Australia derives from the Judiciary Act, together with the *Federal Court of Australia Act 1976* and the *Family Law Act 1975*, and permits the High Court to grant leave to appeal from decisions of:

(a) State Supreme Courts;

(b) State courts exercising federal jurisdiction;

(c) the Federal Court of Australia; and

(d) the Family Court of Australia.

In considering whether to grant an application for leave to appeal from a judgment, the High Court may have regard to any matters that it considers relevant, but it is required to have regard to whether the application before it:

(a) involves a question of law that is of public importance, or upon which there are differences of opinion within, or among, different courts; or

(b) should be considered by the High Court in the interests of the administration of justice.

The High Court is now the final court of appeal in Australia.

Cross-vesting of Jurisdiction

Since 1 July 1988 a cross-vesting scheme has operated in relation to the Federal Court, the Family Court and the State and Territory Supreme Courts. The scheme was designed to eliminate jurisdictional limitations in superior courts within Australia, without having to amend the Constitution and without disturbing separate court structures. The cross-vesting scheme comprises the *Jurisdiction of Courts (Cross-vesting) Act 1987* and the counterpart State and Northern Territory legislation. The scheme has two basic components; the cross-vesting of jurisdiction between Commonwealth, State and Territory superior courts and provisions enabling and directing the transfer of proceedings between those courts.

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 an Industrial Division and a General Division. Matters arising under the *Industrial Relations Act 1988* are dealt with in the Industrial Division and all other matters are dealt with in the General Division. The Court sits as required in each State, 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 Commonwealth Parliament. Except in cases where a hearing had actually commenced before 1 February 1977, the jurisdiction formerly exercised by, respectively, the Federal Court of Bankruptcy and the Australian Industrial Court have been transferred to the Federal Court.

The Federal Court of Australia has been invested with original jurisdiction, concurrent with that of the High Court of Australia, in relation to matters in which a writ of mandamus or prohibition or an injunction is sought against an officer of the Commonwealth of Australia.

The Federal Court of Australia has appellate jurisdiction in relation to the decisions of single judges of the Court, decisions of the respective Supreme Courts of the Australian Territories (but not the Northern Territory), and certain decisions of State Supreme Courts when exercising federal jurisdiction (for example, under the *Income Tax Assessment Act 1936* and the *Patents Act 1952*).

Family Law

The *Family Law Act 1975*, which commenced operation on 5 January 1976, 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 in Australia. 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 matrimonial conduct and fault are no longer taken into account as grounds for divorce. The Act provides that there is only one ground for divorce - that of irretrievable breakdown of a marriage - which ground is established if the husband and wife have been separated and have lived apart from each other for 12 months and there is no reasonable likelihood of their reconciliation.

The provisions of the Family Law Act dealing with the maintenance, custody and welfare of children of a marriage have, since 1 April 1988, applied to all children (including ex-nuptial children) in New South Wales, Victoria, South Australia, Tasmania, the Australian Capital Territory, the Northern Territory, and Norfolk Island. In Queensland and Western Australia, the Family Law Act does not apply to ex-nuptial children, who are subject to State laws.

Proceedings under the Family Law Act are dealt with by the Family Court of Australia and by certain other courts in the Australian 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. (The courts in which an undefended application for dissolution may be instituted or heard have been limited by regulation); 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 Court of Petty Sessions.

A State Family Court has been established in Western Australia to deal with family law matters in that State. That Court applies the provisions of the Family Law Act in dealing with matters related to dissolution and nullity of marriages, the custody and welfare of children of marriages, and maintenance and property settlements.

Under the Family Law Act, great emphasis is placed on the counselling services available through the Family Courts to persons involved in proceedings, as well as to any persons who have encountered marriage problems or difficulties relating to the resolution of custody and access questions. It is not, however, 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 their children.

In relation to the guardianship and custody of children, the Family Law Act provides that both parents are guardians, and have, subject to a court order to the contrary, the joint custody of their children under 18 years of age. However, a parent or another interested person can apply to the Court for sole custody of a child at any time.

In disputes in which the welfare of a child is in issue, 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. A court is guided by statutory considerations, which include, where appropriate, the wishes of a child. Parents of a child may agree on custody and guardianship matters and register their agreement in a court. 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 receive 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 at any time by either a husband or wife, and irrespective of whether the parties intend to divorce.

There are certain 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 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 of, and court approval for, maintenance agreements made by the parties.

Both parents of a child have a primary duty to maintain the child. This duty has priority over all other commitments of a parent other than commitments necessary for self support and support of any other person that a parent has a legal duty to maintain. The Court is guided by statutory considerations in deciding what order to make. Those considerations relate to the financial support necessary to maintain the child and the contributions each party should make to that financial support. A court is required to disregard the entitlements of the child or their parents to income tested pensions. In limited circumstances a court may make an order that a step-parent maintain a step-child.

Since 1 June 1988, the Child Support Agency, an office established within the Australian Taxation Office, collects periodic child maintenance and some spousal maintenance for a wide range of persons, including pension recipients, sole parents who have separated since that date, or who have never cohabited with the parent of a child born since that date. The Child Support Agency uses maintenance collection and enforcement methods similar to those used for the collection and enforcement of income tax.

Since 1 October 1989 the *Child Support (Assessment) Act 1989* has provided a formula for the administrative assessment of maintenance by the Registrar of Child Support. The purpose of an administrative assessment is determination of maintenance. The scheme aims to ensure that parents share the cost of child support according to their capacity to pay and to provide for adequate support of children. The legislation applies only to children born after 1 October 1989, or those whose parents separate after that date. The new legislation does not prevent parents from reaching their own child maintenance agreements, or from seeking a judicial review of an administrative assessment.

The Court has power to settle disputes about the parties' 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 financial and non-financial contributions made by each party during the marriage, and the matters the Court is required to consider in dealing with maintenance applications.

The Family Law Act also established two statutory bodies that assist and advise the Attorney-General on family law matters. They are the Family Law Council, an advisory body that is based in Canberra, and the Australian Institute of Family Studies, a research body that is based in Melbourne.

Family Court of Australia

The Judges of the Family Court of Australia are chosen because of their suitability to deal with matters of family law by reason of their training, experience and personality. Staff who are attached to the Court include trained counsellors and legally qualified Registrars and Deputy Registrars.

Proceedings under the Family Law Act in the Family Court are heard in open court, although persons may be excluded from the Court by court order. Some proceedings may be heard in chambers. No publicity that identifies the person or persons involved in 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, however, exempted from this prohibition.

The Family Court aims to be a 'helping' court. The Principal Director of Court Counselling and a staff of court counsellors assist the parties to a marriage to settle their problems. This help is available whether or not the parties are contemplating divorce or other proceedings, if counselling assistance is sought. These services complement those already provided by voluntary marriage counselling agencies. People may approach the Court counselling service by calling in person, by writing or telephoning, or by making an approach through a legal practitioner.

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 Commonwealth, State or Territory law, are dealt with by State or Territory courts.

Each State and Territory court system is organised and operates independently. However, within each system, which comprises both courts and general jurisdiction and certain specialist courts and tribunals, the courts are organised hierarchically according to the nature of the several matters with which they may deal.

Appeals

The various State 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 in their respective jurisdictions. 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.

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 and Licensing Courts. These courts or tribunals deal primarily with civil matters or matters of an administrative nature.

Courts of Marine Inquiry

Matters that come within the jurisdiction of Courts of Marine Inquiry are contained in the Commonwealth *Navigation Act 1912*. The principal areas of these Courts' jurisdiction are to make inquiries into casualties, including missing ships and events entailing loss of life on or from ships.

When the Commonwealth Department of Transport and Communications is advised of an incident of the kind referred to above, the Minister for Transport and Communications may (and usually does) appoint an officer to conduct a preliminary investigation. The officer then conducts interviews with the parties involved and, based on the results of these interviews, advises 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.

Statistics

Information relating to the operation of courts in particular Australian States may be obtained from the respective State *Year Books* and from ABS publications relating to criminal matters finalised in the Courts.

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. This tribunal is an independent body whose function is to review the decisions made by Commonwealth Ministers, authorities and officials under certain laws of the Commonwealth of Australia. The Tribunal is able to substitute its own decision in those areas in which it has jurisdiction, which covers decisions made under more than 200 Commonwealth enactments, including decisions under the *Social Security Act 1947,* the *Migration Act 1958,* the *Customs Act 1901,* the *Export Market Development Act 1974,* the *Freedom of Information Act 1982,* the *Repatriation Act 1920,* the *Veterans' Entitlements Act 1986* and the *Civil Aviation Act 1988.* Further additions to the Tribunal's jurisdiction are made from time to time.

The Principal Registry of the Administrative Appeals Tribunal is situated in Brisbane 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 by the Federal Court of Australia of administrative action taken under Commonwealth legislation. Where an order of review is sought by an aggrieved person, the Court is empowered to review the lawfulness of a decision, the 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* to investigate complaints about the administrative actions of Commonwealth Government departments and prescribed authorities.

The Ombudsman has special powers to investigate complaints against the Australian Federal Police and actions of agencies relating to freedom of information, and to inspect record-keeping procedures for telephone interceptions under the *Complaints (Australian*

Federal Police) Act 1981, the *Freedom of Information Act 1982*, and the *Telecommunications Act (Interception) Act 1979* respectively.

The Ombudsman was designated the Defence Force Ombudsman in 1983 by amendment to the Ombudsman Act, with power to investigate matters relating to service in the Australian Defence Force by serving and former members.

Complaints can be made to the Commonwealth Ombudsman orally or in writing. The Ombudsman has a discretion not to investigate or to discontinue investigation if, for example, the complaint is vexatious or frivolous or if the agency concerned has not been given a reasonable opportunity to resolve the matter or if another more appropriate means of review is available.

The Commonwealth Ombudsman has extensive powers to require the production of documents and information. On completion of an investigation, consideration is given to whether the action in question was illegal, unjust, oppressive, improperly discriminatory, or, wrong. The Ombudsman can also assess and report on the reasonableness of any law, rule or policy under which the action was taken.

If necessary, the Commonwealth Ombudsman can recommend to the agency concerned that it take appropriate remedial action. If the agency fails to comply with such a recommendation, the Ombudsman can report successively to the Prime Minister and to the Commonwealth Parliament.

The Commonwealth Ombudsman has regional offices in all States and Territories and a central office in Canberra. In Tasmania and the Northern Territory the Commonwealth Ombudsman is represented by the State Ombudsman.

The Ombudsman is also the Ombudsman for the Australian Capital Territory, a separate position created by the *A.C.T. Ombudsman Act 1989*.

The Human Rights and Equal Opportunity Commission

The Human Rights and Equal Opportunity Commission was established by the Australian Government on 10 December 1986 and replaced the Human Rights Commission that had existed for the previous five years. The Commission's functions relate to the promotion of understanding, acceptance and public discussion of human rights in Australia, including those set out in the following United Nations instruments:

- the Convention Concerning Discrimination in Respect of Employment and Occupation;
- the International Covenant on Civil and Political Rights;
- the Declaration on the Rights of the Child;
- the Declaration of 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 consists of a President, a Human Rights Commissioner, a Race Discrimination Commissioner and a Sex Discrimination Commissioner—the latter two Commissioners reflecting the basic human rights obligations and guarantees contained in the *Racial Discrimination Act 1975* and the *Sex Discrimination Act 1984* which confer specific functions on the Commission. The Privacy Commissioner is an ex-officio member of the Commission.

The major functions of the Commission include: the examination of proposed Commonwealth legislation to ascertain whether any provisions are inconsistent with, or contrary to, human rights; inquiry into practices that may be inconsistent with, or contrary to, human rights, and the settlement of matters arising therefrom by inquiry and conciliation or report to the Commonwealth Attorney-General, as appropriate; undertaking research and educational programs relating to human rights; and the examination of international instruments to ascertain whether changes need to be made in domestic laws to comply with international agreements to which Australia is a party.

On 1 January 1990 Regulations came into effect which enable the Commission to investigate and conciliate in relation to complaints of discrimination in employment or occupation on any of a number of new grounds. These grounds are: age; medical record; criminal record; impairment; marital status; mental, intellectual or psychiatric disability; nationality; physical disability; sexual preference; and trade union activity. Discrimination on these grounds is not, however, actually, made unlawful by the Regulations.

The *Human Rights and Equal Opportunity Commission Act 1986*, which established the Commission, also empowers the Commonwealth Attorney-General to enter into arrangements with the Australian States in relation to the performance, on a joint basis, of any of the Commission's functions; the performance by a State of any of the Commission's functions; or by the Commission of any functions on behalf of a State relating to human rights or discrimination in employment or occupation.

Where the Commission considers that an amendment in federal law or practice is required, the Commission is required to report to the Attorney-General and such reports are required to be made public by tabling in the Commonwealth Parliament. The Commission is also required to furnish annual reports to the Attorney-General.

The Privacy Commissioner

The Office of Privacy Commissioner, who is an ex-officio member of the Human Rights and Equal Opportunity Commission, was established by the *Privacy Act 1988* which came into force on 1 January 1989. The Privacy Commissioner operates under the Privacy Act, which sets out the guidelines that are to be followed by Commonwealth agencies in relation to the collection, storage, handling and use of personal information. These guidelines are called 'Information Privacy Principles' (IPPs) in relation to personal information generally, and 'Tax File Number Guidelines' in relation to tax file numbers. Obligations under the Tax File Number Guidelines extend beyond the scope of the Commonwealth bodies and also apply to private sector persons, such as employers and tax agents.

The Privacy Commissioner's role, essentially, is to ensure compliance with these guidelines. The functions of the Commissioner can be divided broadly into four areas:

- the investigation of complaints about practices which may breach the IPPs or the Tax File Number Guidelines;
- the auditing, and ensuring compliance with, the IPPs or the Tax File Number Guidelines, including, where requested, the examination of proposed legislation and advising the relevant Minister on its privacy implications;
- advising on developments in technology and privacy policy issues; and
- educating the community on the need to uphold information privacy in the handling of personal information.

The Privacy Commissioner is required by the Privacy Act to report annually on the operation of the Act to the Attorney-General, who is required to table the report in Parliament.

Freedom of Information Act

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 Australian 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 or to all agencies. Exempt documents include:

- documents that affect the national security, defence, international relations and relations with States;
- Cabinet and Executive Council documents;
- internal working documents;
- documents that affect enforcement of the law and protection of public safety;
- other documents that are exempt by reason of secrecy provisions of other enactments, financial or property interests of the Commonwealth, personal privacy and legal professional privilege;
- documents concerning business affairs or confidential material; and
- documents made available for purchase or open access upon payment of a fee.

Agencies which are exempt either wholly or in relation to their competitive commercial activities include security agencies and those agencies which are wholly engaged in commercial activities in competition with the private sector. These agencies are listed in Schedules 1 and 2 to the Act.

A fee of $30 is payable by the person requesting access and charges are levied depending on the amount of information and decision-making time that is involved. The fee and charges may be remitted in full or part on receipt of a request showing hardship, personal affairs or public interest grounds.

The public is not required to provide reasons for requesting access to documents. However, all requests under the Act are to be made 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, the agency is required 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.

The Act contains extensive provisions for review of decisions made under the Act, including review by the Administrative Appeals Tribunal and the Commonwealth Ombudsman.

Commonwealth Royal Commissions

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 Australian 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. These reports are usually also tabled in the Commonwealth Parliament.

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 failure 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 Australian 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 officer of the Commonwealth'.

LETTERS PATENT ISSUED FROM 1.7.84 TO 30.6.90

Name of Royal Commission	*Commissioner(s)*	*Date of issue of Letters Patent*
Royal Commission into British Nuclear Tests in Australia	THE HON J.R. McCLELLAND MRS J. FITCH DR W.J.A. JONAS	16 July 1984
Royal Commission of Inquiry into Alleged Telephone Interceptions	THE HON. MR JUSTICE D.G. STEWART	29 March 1985
Royal Commission of Inquiry into Chamberlain Convictions	THE HON. J.R. MORLING	2 April 1986
Royal Commission into Grain Storage, Handling and Transport	MR JAMES CARVELL McCOLL	13 October 1986
Royal Commission into Deaths in Custody of Aboriginals and Torres Strait Islanders	THE HON. J.H. MUIRHEAD	16 October 1987
	THE HON. J.H. MUIRHEAD	21 December 1987
	THE HON. J.H. MUIRHEAD	6 May 1988
	THE HON E.F. JOHNSTON, QC	6 May 1988
	THE HON. J.G. WOOTTEN, QC	6 May 1988
	MR L.F. WYVILL, QC	6 May 1988
	THE HON. J.H. MUIRHEAD	27 October 1988
	THE HON. E.F. JOHNSTON, QC	27 October 1988
	THE HON. J.G. WOOTEN, QC	27 October 1988
	MR L.F. WYVILL, QC	27 October 1988
	THE HON. D.J. O'DEA	27 October 1988
	THE HON. D.J. O'DEA	7 December 1988
	THE HON. J.H. MUIRHEAD	27 April 1989
	THE HON. E.F. JOHNSTON, QC	27 April 1989
	THE HON. J.G. WOOTTEN, QC	27 April 1989
	MR L.F. WYVILL, QC	27 April 1989
	THE HON. D.J. O'DEA	27 April 1989
	MR P.L. DODSON	28 June 1989

FINAL ROYAL COMMISSION REPORTS PRESENTED FROM 1.7.84 TO 30.6.90

Name of Royal Commission	*Date of presentation*	*Tabled in Parliament*
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
Royal Commission of Inquiry into Activities of the Nugan Hand Group	28 June 1985	27 November 1985
Royal Commission on the Use and Effects of Chemical Agents on Australian Personnel in Vietnam	31 July 1985	22 August 1985
Royal Commission into British Nuclear Tests in Australia	20 November 1985	5 December 1985
Royal Commission of Inquiry into Alleged Telephone Interceptions	30 April 1986	1 May 1986
Commission of Inquiry into Compensation Arising from Social Security Conspiracy Prosecutions	30 April 1986	10 June 1986
Royal Commission of Inquiry into Chamberlain Convictions	22 May 1987	2 June 1987
Royal Commission into Grain Storage, Handling and Transport	18 February 1988	15 March 1988

National Crime Authority—NCA

The National Crime Authority was established by the Commonwealth Government in July 1984 as provided by the *National Crime Authority Act 1984*. Similar legislation was passed in each State and the Northern Territory to underpin the work of the NCA in those jurisdictions, making the NCA the only law enforcement agency in Australia whose investigations are not limited by jurisdictional or territorial boundaries.

The NCA operates from three offices, in Melbourne, Sydney and Adelaide, and has a permanent staff of around 300, with qualifications and expertise in a variety of fields including law, accounting and information analysis. In addition, police investigators are attached to the NCA from the Australian Federal Police and the Northern Territory and State police forces, for varying periods.

The decision to establish the NCA was taken in response to the findings of several Royal Commissions conducted in the late 1970s and early 1980s, which revealed the extent of organised criminal activity in Australia. The NCA's primary aim is therefore to take effective action to reduce the incidence and impact of organised crime in Australia, but the term 'organised crime' is not in fact used in the *National Crime Authority Act 1984*, which instead describes such activity in terms of 'relevant criminal activity' and 'relevant offence'.

A 'relevant offence' is defined as one involving two or more offenders and substantial planning and organisation, that involves the use of sophisticated methods and techniques, is of a kind ordinarily committed in conjunction with other like offences, and involves theft, fraud, tax evasion, currency and company violations, illegal drug dealings, bribery, illegal gambling, extortion, violence, passport forgery, armament dealings and other specified offences.

As required by the Act, the NCA carries out general and special functions in relation to relevant criminal activities.

General—The NCA is required to collect, analyse and disseminate information and intelligence; undertake general investigations; and initiate the establishment of and coordinate the work for Commonwealth, State and joint task forces.

Special—The NCA is required to investigate matters covered by references issued to it by members of the Inter-Governmental Committee, which is comprised of ministers of the Commonwealth Government, Northern Territory and State Governments.

In conducting a general or special investigation, the NCA is required to assemble admissible evidence relating to offences against the laws of the Commonwealth, States or Territories to enable the prosecution of offenders and to provide that evidence to the appropriate Attorney-General or relevant law enforcement agency, such as the Director of Public Prosecutions.

Information may be passed to prosecution authorities to enable such agencies to pursue civil remedies or other action to confiscate the proceeds of criminal activity.

The NCA may also make recommendations to relevant ministers for law or administrative reform.

Apart from the normal powers of a law enforcement agency, the NCA may use special powers when it has been given a reference by a member of the Inter-Governmental Committee. These powers include the power to issue summonses and conduct in-camera hearings at which witnesses are required to give evidence or produce documents, and the power to seek the delivery to the NCA of the passport of a person who has been summonsed to appear at a hearing, but who is suspected of seeking to leave Australia.

The work of the NCA is monitored by the Inter-Governmental Committee and by the Parliamentary Joint Committee on the NCA. The Act provides for the review by the Federal Court of certain decisions, and other decisions are subject to review pursuant to the *Administrative Decisions (Judicial Review) Act 1977.* The NCA is required to submit to the Inter-Governmental Committee an annual report which is subsequently tabled in the Commonwealth Parliament.

Consumer affairs

The Commonwealth involvement in consumer affairs derives substantially from the *Trade Practices Act 1974.* The Commonwealth Attorney-General has responsibility for Part V (Consumer Protection) of the Act that deals with unfair practices, provides private law rights against sellers, manufacturers and importers, and provides for product safety (including provision for the banning and/or recall of goods considered to be unsafe) and information standards.

The Federal Bureau of Consumer Affairs, located in the Attorney-General's Department:

- provides the Minister for Justice and Consumer Affairs with advice on the consumer protection provisions of the Trade Practices Act and on a range of consumer issues;
- reviews and develops Commonwealth policy on domestic food and beverage standards, recalls and consumer product safety;
- reviews and develops Commonwealth policy on packaging and labelling; and
- administers product safety and information standards of the Trade Practices Act, including monitoring and enforcing compliance with standards and initiating product recalls if necessary.

The National Consumer Affairs Advisory Council provides independent advice to the Minister for Justice and Consumer Affairs on consumer affairs issues. The members of this Council have backgrounds in consumer affairs, industries, trade unions and government.

The Trade Practices Commission is generally responsible for the administration and enforcement of the Trade Practices Act, except for Division 1A Part V of the Act. The Commission 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 Australian State and Territory consumer affairs agencies, which administer their own legislation and provide the principal consumer complaint handling mechanisms.

Coordination 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 coordinated approach to product safety and information matters. The Commonwealth Government also promotes consumer awareness through financial support to two peak consumer organisations—the Australian Federation of Consumer Organisations and the Australian Financial Counselling and Credit Reform Association.

Legal Aid

The objective of the Commonwealth's legal aid scheme is to maximise access to justice by all members of the community.

Legal aid policy and service development, evaluation and coordination is largely undertaken at the Commonwealth level by the Office of Legal Aid and Family Services and delivered throughout the country by independent Legal Aid Commissions, Aboriginal Legal Services and other community based legal centres and services.

The Commonwealth provides over half of the funding for legal aid, with the rest made up by State Government, Law Society trust account funds and contributions from clients. Legal aid services and advice are provided directly by staff lawyers or by way of subsidies to the private legal profession. Assistance is directed to those persons who are most in need by way of merit and means tests.

In addition to the provision of services in family, criminal, civil and administrative law matters by the agencies described above, the Commonwealth Attorney-General's Department also provides assistance for special interest and test cases, Royal Commission hearings, War Crimes cases, veterans matters, internal disputes in federal trade unions and actions under international conventions (e.g. relating to child abduction, overseas maintenance and civil and political rights).

Information on legal aid funding and services is contained in the Annual Reports of the Commonwealth Attorney-General's Department.

The Police

The principal 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 other relevant Acts. With the exception of the Australian Federal Police, police forces in Australia are under the control of the respective State and Northern Territory Governments, but their members perform certain functions on behalf of the Australian Government, such as the registration of aliens, and, in conjunction with the Australian Federal Police and other Commonwealth officers, they enforce various Commonwealth Acts and Regulations.

Australian Federal Police—AFP

The AFP was formed in October 1979 and has its headquarters in Canberra. Its national operations are conducted through six Regional Commands. With the recent stationing of members in Rome the AFP now has Police Liaison Officers at 15 overseas posts. A group of AFP members is attached to the United Nations Peacekeeping Force on Cyprus. In the Australian Capital Territory, the AFP provides a full range of general community policing services, including traffic control, special operations, search and rescue services and conventional crime investigations.

The AFP is Australia's only national police service and is a central part of the Commonwealth Government's criminal justice strategy. In both the federal investigative and its community policing roles, the AFP is the major institution through which the Commonwealth pursues its specific law enforcement interests.

The AFP Act incorporates the conditions of fixed term employment and the implementation of a unified workforce. The unified workforce, which is currently being implemented, is to place police officers (members) and staff members under the AFP Act and subject to one common industrial award and one code of conduct. This will help overcome the existing legislative and industrial barriers to the efficient and effective use of human resources and provide a workforce of members and staff members sharing common goals and values under common terms and conditions of employment. The fixed term appointments are being introduced to attract and retain high calibre personnel, to combat corruption and to provide rewarding careers. In association with the fixed term appointments is the introduction of a Performance Management Program to measure individual performance.

The objectives of the AFP are:

- to enhance the Commonwealth's ability to prevent, detect, investigate, and present for prosecution, criminal offences committed against its laws, revenue and expenditure;
- to continue to improve the quality and responsiveness of police services provided to the community of the Australian Capital Territory;
- to improve the quality of police services required to protect other Commonwealth interests;
- to provide leadership in developing effective relationships with other police services, law enforcement and related agencies to ensure cohesion and co-ordination in countering criminal threats and activities against the Australian Community;
- to maintain operational excellence through people, technology and leadership; and
- to foster a culture which demonstrates reliability, integrity and ethical behaviour and respects the rights of the individual.

The AFP Corporate Plan identifies the future direction of the AFP as being primarily a criminal investigative and intelligence agency, outside its commitment to community policing in the ACT. In the attainment of this objective the Commonwealth Government agreed to the gradual withdrawal of the AFP from the function of airport security.

Police strengths

The total active strength of the sworn police forces, expressed as a proportion of the population, has remained steady from 1982 to 1988 at approximately 220 police for every 100,000 people. The following table shows the active strengths of non-civilian police personnel in police forces in Australia from 1987 to 1989. Further detail on the operations of each force may be found in the respective police annual reports to their Ministers.

POLICE FORCES

Year	AFP(a)	NSW	Vic.	Qld	SA	WA	Tas.	NT
At 30 June—								
1987	2,642	11,608	8,796	5,072	3,646	3,287	1,010	681
1988	2,713	12,280	9,229	5,085	3,549	3,243	1,028	748
1989	2,580	12,568	9,678	5,219	3,565	3,572	1,075	746

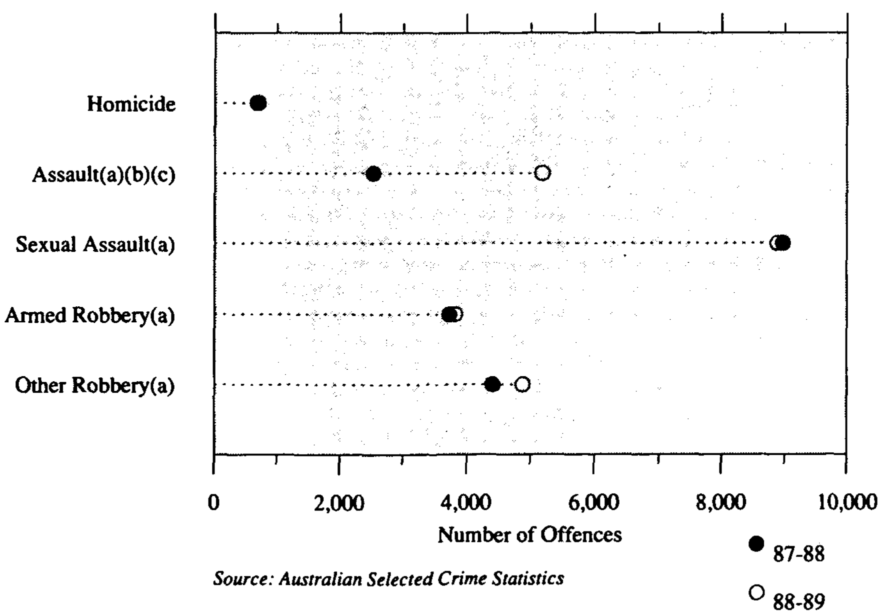
(a) Excludes protective services units.

Crime Statistics

The compilation of statistics on crime involves recording and classifying a diversity of acts considered to be criminal. Responses to the 1983 Crime Victims Survey, conducted by the Australian Bureau of Statistics, indicated that only about 59 per cent of household victimisations and 44 per cent of personal victimisations were reported to police, and although the extent of reporting of crime may vary from time to time according to the amount of public attention focussed on particular aspects of crime, there will always be some degree of underreporting.

The following charts of selected offences show the numbers of offences in certain categories of crime which were reported to the police for the two years to 30 June 1986 and 30 June 1987. Not all jurisdictions employ the same definitions when classifying offences and the figures should therefore be treated with caution. However, the movements in figures from year to year are an indicator of the movements in levels of crime reported to the police.

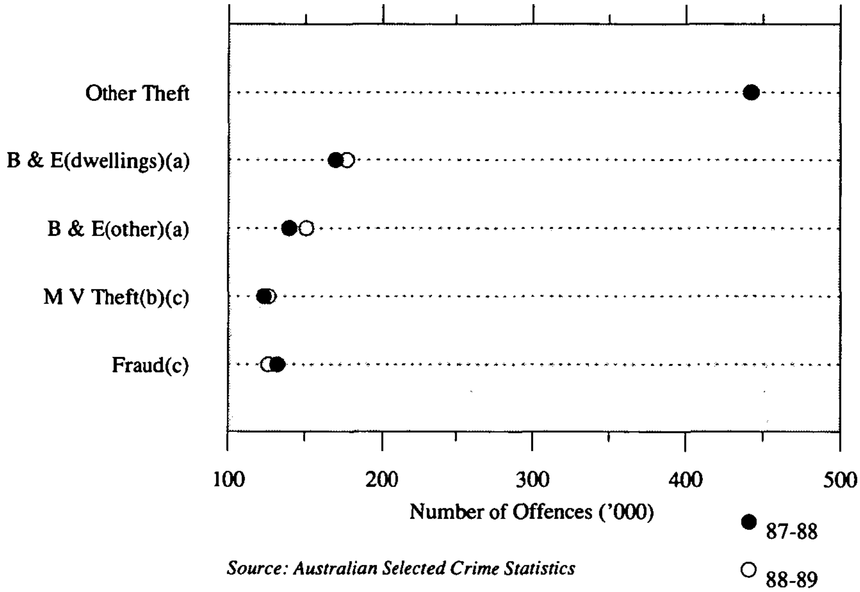
SELECTED OFFENCES AGAINST THE PERSON, AUSTRALIA
1987-88 AND 1988-89



Source: Australian Selected Crime Statistics

(a) These figures are produced at State level and due to differences in legislation and counting rules these figures are not strictly comparable. For the purpose of this graph, to give an Australia wide indication of these types of offences, this snapshot has been produced. *(b)* Due to changes in administrative procedures in Victoria, an unusually high number of offences have been reported in this period due to a catch-up in a backlog of work. *(c)* Assault occasioning grievous bodily harm.

SELECTED OFFENCES AGAINST PROPERTY, AUSTRALIA
1987-88 AND 1988-89



Source: Australian Selected Crime Statistics

(a) B & E = Break and Enter. *(b)* M V Theft = Motor Vehicle Theft. *(c)* These figures are produced at State level and due to differences in legislation and counting rules, these figures are not strictly comparable. For the purpose of this graph, to give an Australia wide indication of these types of offences, this snapshot has been produced.

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, and there is cooperation between the Commonwealth Government, State and Territory Governments, the various police forces, and other agencies in order to combat the perceived serious and growing threat to good order which is posed by the traffic in and abuse of drugs of dependence. The Australian Customs Service has responsibility for the enforcement of laws controlling the illicit importing and exporting of drugs, but each police force 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 as required by international drug conventions.

The following table provides information about selected drug seizures by Commonwealth agencies during the period from 1984 to 1988.

SELECTED DRUG SEIZURES BY COMMONWEALTH AGENCIES(a)

Type of drug	*1984*	*1985*	*1986*	*1987(b)*	*1988*
			—grams—		
Opium	40.00	760.00	167.00	*(c)*309.00	*(c)*2,617.00
Heroin	101,550.00	57,886.00	30,937.00	31,692.00	140,163.00
Cocaine	13,100.00	12,801.00	21,581.00	28,368.00	27,106.00
Cannabis—all types*(d)*	6,912,860.00	3,129,588.00	2,987,766.00	4,729,892.00	4,593,124.00

(a) These figures exclude seizures made by the National Crime Authority and State Police for which Commonwealth charges have been laid. *(b)* 1987 revised figures as per 1988-89 AFP Annual Report. *(c)* Includes Opium, Raw Opium, Opium Poppy Seeds and Opium Straw. *(d)* Excludes seizures of plants.

Further information on the widespread problems arising from drug abuse in Australia, and how these problems are being approached, may be found in the annual report 'Illicit Drugs in Australia', compiled by the Australian Federal Police and published by the Australian Government Publishing Service.

Corrective Services

The term 'correction' (or its derivatives) as used here refers to the objectives of the criminal justice system regarding detention and supervision of offenders.

The principal objectives of sentencing are to deter potential offenders, to express society's disapproval, to reduce the opportunity for further crime, to rehabilitate the offender, and to compensate the victim(s).

These objectives are reflected to varying degrees in the different forms of correctional options which are available to the courts in each State and Territory. These options fall broadly into three main categories:

- those that do not involve supervision or detention of the offender, such as fines, bonds and unsupervised recognisances;
- those involving supervision in the community, usually for a specified period, or until some educational or community reparative target is achieved, such as probation or community service orders; and
- those involving detention, either in prisons or other institutions, or at home subject to a home detention order.

In recent years it has become common for courts to impose sentences combining several different components, in order to ensure that the punishment is appropriate to the crime and the circumstances of the offender.

All States and the Northern Territory operate prisons and other correctional services. Separate provisions exist in each State and Territory for dealing with juvenile offenders. Convicted adult prisoners from the Australian Capital Territory serve their sentences in New South Wales prisons, but local provision is made for the short-term custody of remand prisoners, and for probation and parole services. The Commonwealth Government does not operate any prisons or other correctional services, and federal offenders (i.e. persons convicted of offences under Commonwealth laws) fall within the jurisdiction of State agencies for correctional purposes.

Characteristics of Prisoners

The Australian Institute of Criminology publishes the results of an annual prison census which is coordinated by the National Correctional Statistics Committee. The census relates to all persons, convicted or not convicted, who were held in custody in gazetted Australian prisons, for adult offenders on the night of 30 June, and includes those prisoners temporarily absent from prison (e.g. prisoners in hospitals, or away on work release schemes).

Because the census measures prison occupancy at a particular point in time, care should be taken when comparing the results with other data produced on prison populations, which may be related to average daily occupancy rates. Discrepancies may also be found between the census figures and those produced from the same data by corrections departments, because of differences in counting rules.

Data for the following tables on prison occupancy were supplied by the Australian Institute of Criminology from the results of the 1989 prison census.

NUMBER OF SENTENCED PRISONERS BY TYPE OF SENTENCE IMPOSED(a), AUSTRALIA 1989(b)

(*Source*: Australian Institute of Criminology)

Type of sentence	*Number of prisoners*
Life	643
Governor's Pleasure	102
Administrative(*b*)	5
Indefinite(*c*)	4,990
Fixed term	4,805
Fine default only	155
Periodic detention	525
Unknown	44
Total	*11,269*

(*a*) Type of sentence is determined by the cumulative effect of all sentences imposed. (*b*) Includes unsentenced prisoners subject to deportation orders. (*c*) Refers to cases where both a minimum and a maximum term are set and the actual sentence to be served lies somewhere between the two limits.
NOTE: This table excludes all remandees.

NUMBER OF PRISONERS BY MOST SERIOUS OFFENCE/CHARGE(a), BY AGE(b), AUSTRALIA 1989

(*Source:* Australian Institute of Criminology)

	Age group									
Offence/charge(a)	*Under 20*	*20–24*	*25–29*	*30–34*	*35–39*	*40–44*	*45–49*	*50+*	*Unknown*	*Total*
					—Total persons—					
Homicide	50	233	249	251	171	147	98	137	16	1,352
Assault	96	345	260	161	90	62	32	22	24	1,092
Sex offences	60	199	236	235	188	165	99	114	22	1,318
Other against person	10	38	24	34	19	10	3	3	2	143
Robbery	86	449	387	337	153	67	19	17	2	1,517
Extortion	3	8	7	5	0	1	1	0	0	25
Break and enter	284	712	514	269	127	38	24	11	13	1,992
Fraud and misappropriation	11	66	103	86	100	58	49	61	0	534
Receiving	11	62	62	42	29	19	7	9	0	241
Other theft	204	421	263	138	79	39	20	12	5	1,181
Property damage	43	80	44	19	10	20	3	5	4	228
Environmental	0	0	0	1	2	1	0	1	0	5
Government security	0	0	1	0	2	1	1	3	0	8
Justice procedure	63	239	166	95	64	38	19	17	10	711
Prostitution	5	8	15	5	5	1	1	1	2	43
Offensive behaviour	6	7	9	5	0	3	0	1	1	32
Unlawful possession of weapon	3	12	8	6	8	2	3	1	0	43
Other offences against good order	13	31	29	20	13	5	3	7	2	123
Possession, use of drugs	1	24	51	62	25	16	6	3	1	189
Trafficking drugs	9	107	184	248	197	119	57	50	2	973
Manufacture drugs	0	15	20	21	22	24	11	22	0	135
Driving offences	11	54	77	75	55	31	19	14	7	343
Administrative offences	12	58	44	20	13	9	5	3	0	164
Other traffic offences	14	49	56	38	23	19	12	7	4	222
Other offences	9	29	35	65	47	31	26	24	1	267
Unknown	4	17	19	10	11	9	10	0	3	83
Total persons	1,008	3,263	2,863	2,248	1,453	935	528	545	121	12,964

(*a*) The most serious offence/charge is that offence for which a prisoner received the longest sentence, or that charge which carries the longest statutory maximum penalty. (*b*) The age at which a convicted person would 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 in other jurisdictions, although younger persons convicted of a particularly serious offence may be sent to an adult prison. Inmates of juvenile corrective institutions are not included in this census.
NOTE: This table includes 1,675 remandees.

NUMBER OF SENTENCED PRISONERS BY MOST SERIOUS OFFENCE(a) AND AGGREGATE SENTENCE(b), AUSTRALIA 1989
(Source: Australian Institute of Criminology)

	Duration of aggregate sentence						
Offence	*Periodic detention*	*Under 3 months*	*3 months and under 2 years*	*2 and under 5 years*	*5 and under 10 years*	*10 years and over(c)*	*Total*
Homicide	16	2	9	71	150	890	(d)1,140
Assault	90	27	364	219	132	90	(d)926
Sexual Assault	27	3	87	287	497	288	(d)1,190
Other offences against the person	1	0	18	33	31	22	105
Robbery	9	7	48	266	528	428	1,286
Extortion	0	0	1	9	7	3	20
Break and enter	37	24	630	632	315	92	(d)1,733
Fraud and misappropriation	21	16	183	191	63	11	485
Receiving	18	9	89	42	28	9	(d)196
Other theft	67	33	608	268	72	21	(d)1,073
Property damage	6	23	78	43	24	13	(d)189
Offences against good order(e)	37	78	418	221	73	38	(d)868
Drug offences(f)	73	15	216	312	296	199	1,111
Driving offences	59	82	384	8	4	1	(d)540
Administrative offences	64	9	71	11	3	1	159
Other offences(g)	0	10	53	34	58	93	248

(a) Most serious offence is that for which a prisoner received the longest sentence. *(b)* The longest period that a person may be detained under sentence in the current episode. *(c)* Includes sentences of Life and Detention at the Governor's Pleasure. *(d)* Total includes 'unknown' duration of sentence. *(e)* Includes environmental, government security, justice procedures, prostitution, offensive behaviour and possession of weapon. *(f)* Includes possession, trafficking and manufacture of drugs. *(g)* Includes other offences and unknown offences.
NOTE: This table excludes all remandees.

Criminological Research

Australian Institute of Criminology

The Australian Institute of Criminology, which is located in Canberra, was established as a statutory authority under the *Criminology Research Act 1971* and the *Criminology Research Amendment Act 1986*. The Institute is administered by a Board of Management comprising three members appointed by the Commonwealth Attorney-General, four members representing the States and the Northern Territory, who are appointed by the Criminology Research Council and the Director, who is an ex-officio member of the Board.

The functions of the Institute, as defined in the Criminology Research Acts include:

- the conduct of criminological research (i.e. research in connection with the causes, prevention and correction of criminal behaviour and related matters), and the communication of the results of such research to the Commonwealth and States;
- the provision of advice on needs and programs relating to criminological research, and advice and assistance in relation to any research funded through the Criminology Research Council;
- the conduct of seminars and courses of training and instruction for persons engaged in criminological research or work related to the prevention or correction of criminal behaviour;
- the collection and dissemination of statistics relevant to crime and criminal justice;
- the provision of advice in relation to the compilation of statistics in relation to crime; and
- the publishing of material resulting from, or relating to, its activities.

Since its inception, the Institute has actively assisted in and advised on an extensive range of criminological research projects either directly, or through the Criminology Research Council. The Institute 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 recent publications of the Institute include:

- *Australian Institute of Criminology Annual Report*
- *Criminology Research Council Annual Report*
- *Alcohol and Crime,* Julia Vernon
- *Australian Criminology Information Bulletin*
- *Australian Community-Based Corrections 1987,* Francois Debaecker
- *Australian Institute of Criminology Annual Report*
- *Australian Prisoners 1989,* John Walker
- *Bail in Australia,* Frank Devine
- *Cinch: The Australian Criminology Database*
- *Crime and Justice in Australia: A report to the Nation,* Satyanshu Mukherjee, Debbie Neuhaus and John Walker
- *Criminology Australia,* quarterly journal
- *Crime Prevention for Aboriginal Communities,* Kayleen Hazlehurst
- *Criminology Research Council Annual Report*
- *Preventing Car Theft and Crime in Car Parks,* Susan Geason and Paul Wilson
- *Preventing Graffiti and Vandalism,* Susan Geason and Paul Wilson
- *Preventing Crime in Migrant Communities,* Kayleen Hazlehurst
- *Protecting Counter/Interviewing Staff from Client Aggression,* Bruce Swanton and Darryl Webber
- *Sentencing Robbers in New South Wales,* Ivan Potas
- *The Size of the Crime Problem in Australia,* 2nd ed, Satyanshu Mukherjee and Dianne Dagger
- *Society's Response to the Violent Offender,* Peter Grabosky and William Lucas
- TRENDS AND ISSUES
    - No. 20: *Prison Sentences in Australia*
    - No. 21: *Aids and Prisons*
    - No. 22: *Prostitution Laws in Australia*
    - No. 23: *A Comparison of Crime in Australia and other Countries*
    - No. 24: *Gambling Laws*
- *Violence: Directions for Australia:* final report of the National Committee on Violence
- VIOLENCE TODAY
    - No. 6: *Violence on Television*
    - No. 7: *Violence, Disputes and their Resolution*
    - No. 8: *Racist Violence*
    - No. 9: *Political Violence*
- *Wayward Governance: Illegality and its control in the public sector,* Peter Grabosky

See Year Book Australia 1990 for previous releases.

Criminology Research Council

The Criminology Research Council is comprised of representatives from the Commonwealth, each State and the Northern Territory and is an independent body corporate 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 per cent by the Commonwealth Government, and fifty per cent by State Governments on a proportionate 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.

In the eighteen years that the Council has been in operation it has made grants from the Fund for 194 separate research projects, covering nearly all aspects of crime and criminal justice in Australia, to a total of approximately $2.4 million.

Bankruptcy and Copyright

Bankruptcy

Bankruptcy is a statutory regime for the release of debtors from the payment of their debts and the repayment of creditors out of the proceeds of realisation of the debtor's property. The *Bankruptcy Act 1966* is the current Commonwealth law dealing with the insolvency of individuals and partnerships.

The Act provides for both voluntary and involuntary bankruptcy, and for insolvency administrations outside bankruptcy under Part X. The alternative administrations are the deed of assignment, the deed of arrangement and the composition. The Act also provides, in Part XI, for the administration of deceased estates in bankruptcy. It is a feature of bankruptcy and the alternative administrations that property or money belonging to the debtor, or given to the debtor for the purpose, is vested in a trustee for rateable distribution to creditors.

The Act establishes the Official Trustee in Bankruptcy, the functions of which are to administer bankrupt estates and bankrupt deceased estates. The Official Receivers in Bankruptcy, who are officers of the Attorney-General's Department and staff of their offices, perform the functions of the Official Trustee. The Official Trustee is trustee of about 90 per cent of bankrupt estates, and of all bankrupt deceased estates.

The Act also provides for registration of appropriately qualified persons, usually accountants, as trustees. Registered trustees administer some bankruptcies, but are responsible mainly for the administration of deeds and compositions under Part X of the Act. Registered trustees are registered by order of the Federal Court of Australia.

The Federal Court of Australia exercises jurisdiction in bankruptcy Australia wide. Officers of the Federal Court hold office as Registrars in Bankruptcy. Registrars in Bankruptcy issue bankruptcy notices, and the Act requires various documents, such as petitions, statements of affairs, authorities to trustees, resolutions of meetings of creditors and trustees accounts of receipts and payments to be filed with Registrars in Bankruptcy. These documents are available for public inspection at Federal Court Registries. Registrars in Bankruptcy are responsible administratively, to the Registrar of the Federal Court of Australia.

Registrars in Bankruptcy, Official Receivers and the Inspector-General in Bankruptcy have joint responsibilities for the supervision of registered trustees.

The Inspector-General of Bankruptcy is the administrative head of the Bankruptcy Division of the Attorney-General's Department of which the Official Receivers are part. The Inspector-General's Office is responsible, amongst other things, for compilation of material for inclusion in the Annual Report on the operation of the *Bankruptcy Act 1966*, investigation of complaints about the administration of bankruptcy generally and the provision of policy advice to the Minster with responsibility for bankruptcy matters.

Comprehensive statistics on bankruptcy, and a more detailed account of the bankruptcy administration, are included in the Annual Report on the operation of the *Bankruptcy Act 1966* which is tabled in Parliament and is available for purchase by members of the public.

Copyright

Copyright in Australia is administered by the Commonwealth Attorney-General's Department and 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. Amendments made in 1980 introduced substantial changes in a number of areas of copyright law, including fair dealing, copying by libraries and archives, and copying for educational purposes and for handicapped readers.

Amendments made in 1984 make specific provision for copyright in computer software.

The Act was further amended in 1986 to, among other things:

- significantly strengthen the 'anti-piracy' provisions of the Act;
- increase access to copyright materials for the handicapped, as well as for libraries, archives and their clients;
- extend fair dealing;
- make clear that broadcasts via satellite are subject to the Act; and
- provide for costs in Copyright Tribunal matters to be taxed on the Federal Court of Australia scale of costs.

Most recently, the Act was amended in a number of significant respects. A package of copyright reforms, described by the Attorney-General as the most substantial since 1968, was contained in the *Copyright Amendment Act 1989*.

The reforms include a new statutory licensing scheme to allow educational institutions and institutions for the intellectually handicapped to copy television and radio broadcasts. As well, the Act introduced a revised scheme for educational photocopying along the same lines as the television copying scheme.

The amendments include a blank tape royalty scheme under which home taping of published sound recordings will be lawful. The royalty will be payable by vendors of blank tape to the copyright owner's collecting society which is currently being formed.

The new legislation also gives effect to the majority of recommendations of the Copyright Law Review Committee in relation to performers' protection. Accordingly, unauthorised commercial uses of live performances and recordings of live performances are prohibited under the Copyright Act. The new provisions will also enable Australia to accede to the Rome Convention for the Protection of Performers, Producers of Phonographs and Broadcasting Organisations.

The 1989 amendments also:

- limit copyright protection for artistic works industrially applied and designs registered under the *Designs Act 1906*;
- streamline the operation of the statutory licence under the Act for the manufacture of records of musical works; and
- introduce a number of other reforms which will extend the right of the Australian Archives to copy works in its archival collection, standardise rights of review under the Act by the Administrative Appeals Tribunal and facilitate copyright protection for choreographic works made in the form of film or video.

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THE NATIONAL TRUSTS OF AUSTRALIA

(This special article has been contributed by the Australian Council of National Trusts)

To preserve the best from the past today for the future would most appropriately describe the purpose of the Trust movement in Australia.

The movement began in Australia in 1945 and was primarily initiated as a response to drastic changes in Australian cities in the post-war economic and population boom. The main streets of the central business districts in the cities of Australia saw considerable destruction of once-familiar streetscapes in favour of impersonal high-rise buildings lacking the gracious style and scale of nineteenth century Australia. The National Trusts emerged as organisations primarily concerned with the cultural and historic environment, although the movement is now also very much involved in the conservation of our natural environment.

The Trust movement began in 1945 in New South Wales and was followed by South Australia (1955); Victoria (1956); Queensland (1963); Western Australia (1964); Tasmania (1975); the Australian Capital Territory (1976) and the Northern Territory (1976).

The Australian Council of National Trusts was formed in 1965 to serve the national interests of the Australian Trusts. The Council, as the federal coordinating body of the National Trust movement, has the responsibility for coordinating policies, procedures and programs for implementation at State and Territory levels; to expressing and presenting opinions to national or international bodies; and to coordinating national sponsorship and education projects with State and Territory Trusts.

Today, the National Trusts have a total membership of over 80,000, a substantial force of people who care about Australia's heritage. One of the movement's great strengths is the extensive reserve of voluntary expertise and effort. Working on committees and in other ways the Trust's honorary workforce of approximately 6,506 volunteers undertakes a wide variety of tasks, working in close cooperation with staff. The movement employs approximately 442 staff members.

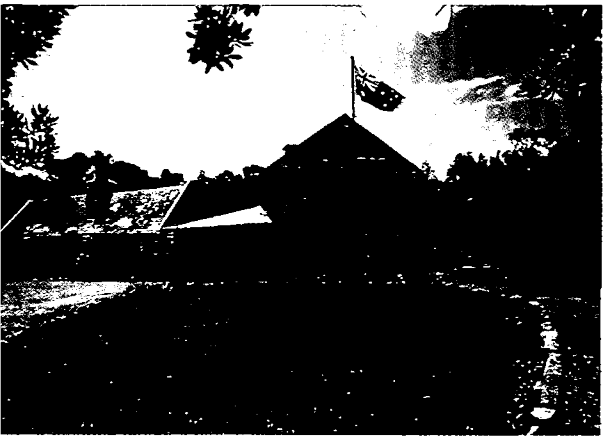
The main aim of the National Trust is to acquire, conserve and present for public benefit, lands and buildings of aesthetic, historic, scientific, social or other special values. This includes historic sites, buildings, towns or conservation areas, industrial remains, gardens, Aboriginal sites and the natural environment. The Trust aims to influence governments and other agencies, both national and international, to act to conserve such values, and to promote public appreciation, knowledge and enjoyment of such places.

Since the inception of the National Trust in Australia, over four decades ago, the National Trusts have played a leading role and have been involved in the extensive work of identifying those parts of our natural, Aboriginal and historic environment which are historically, aesthetically or scientifically significant and which are worthy of preservation. The places classified by the National Trusts have formed a basis for all other heritage registers of protected places and areas in Australia.

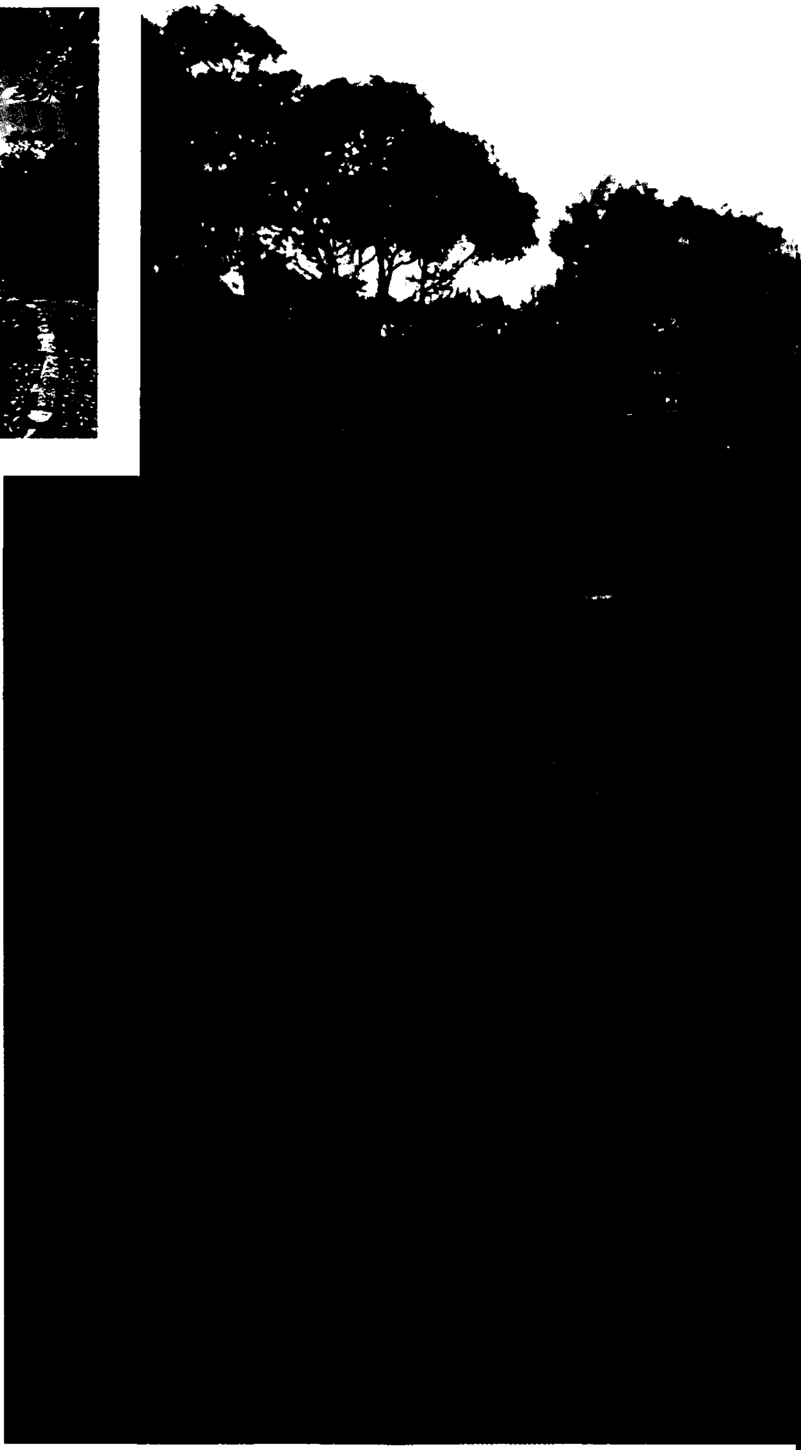
Conservation action, supported by research, is the central feature of the work of the National Trust movement.

Surveys of natural, Aboriginal and historic environments are conducted in order to identify and document the landscapes, townscapes, historic buildings and industrial sites that are very much a part of Australia's environmental heritage. The Trusts maintain registers of such places. Currently about 20,474 places and areas of natural, Aboriginal and historic importance are classified by the National Trusts.

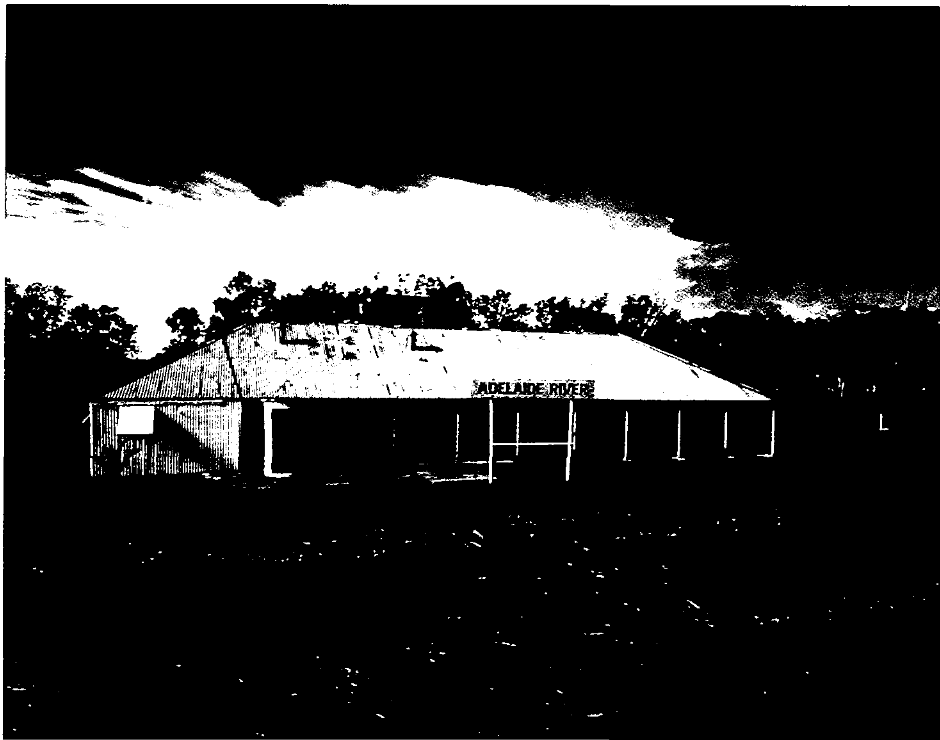
Clarendon, Tasmania. Photo courtesy National Trust of Australia (Tasmania).



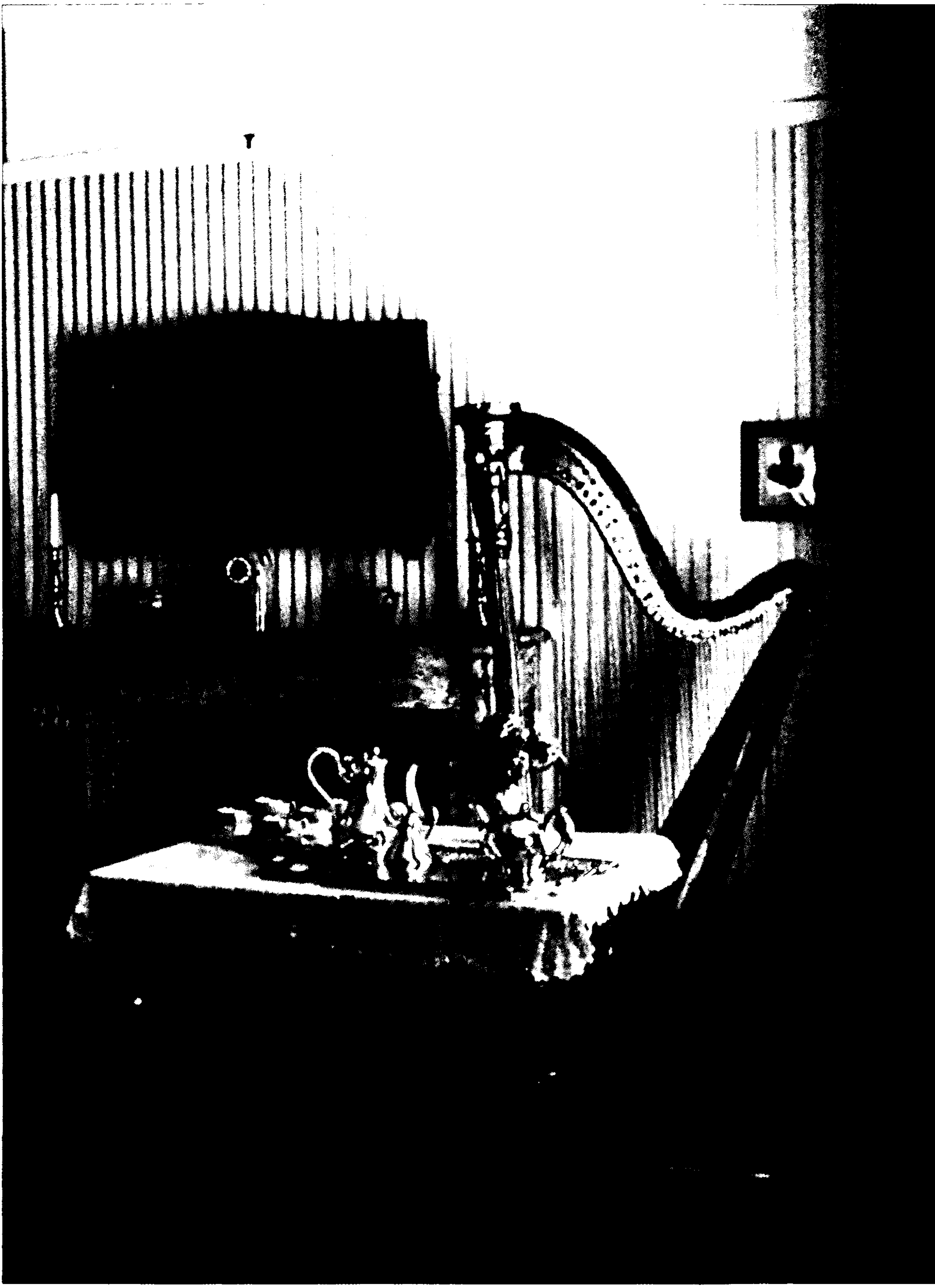
Strawberry Hill. Photo by K.O. Murray.



Strawberry Hill. Photo by K.O. Murray.



Adelaide River. Photo by Peter Jarver.



Dining room, Strawberry Hill. Photo by K.O. Murray.

Submissions are prepared regularly on the environment which provide information to all levels of government to assist in planning and other processes in the interest of heritage conservation. These submissions also contribute to public discussion on conservation issues, promoting debate within the community.

The Australian Council of National Trusts and State and Territory Trusts have been involved in a host of conservation issues, not least of which have been the National Conservation Strategy, Kakadu National Park (NT); Lemonthyme and Southern Forests (Tas); Old Parliament House (ACT); Shelburne Bay (Qld) and Antarctica.

The Australian Council of National Trusts and the Trust movement have strived to develop strategies aimed at promoting an awareness of and interest in Australia's heritage by the public through education programs and other activities including the Open House program.

The Trusts own around 300 properties and through their own efforts spent approximately $2.1 million in 1988–89 on the preservation of Australia's National Estate with $619,000 assistance from the Commonwealth Government.

The Open House program seems to typify public understanding of the Trusts' activities. Trust properties attract about 2 million visitors each year. With major national sponsorship schemes, such as the Amatil 'A Gift to the Nation' of $1.6 million and the 'Heritage '88' sponsorship of $500,000 by the Commonwealth Bank, the Trust has been able to open to the public magnificently restored National Trust properties throughout Australia. Some of these include Bellevue Homestead in Queensland; Juniper Hall in New South Wales; Gulf Station in Victoria; Clarendon in Tasmania; Redruth Gaol in South Australia; The Old Farm at Strawberry Hill in Western Australia and the Hartley Street School in the Northern Territory. These and other Trust properties are open for public inspection and function hire as well as various Trust activities throughout the year.

The following description of a few Trust properties offers an insight into the work of the Trust in conserving Australia's heritage.

Clarendon via Evandale in Tasmania is situated 27 kilometres from Launceston. Clarendon, one of the great Georgian houses of Australia, was constructed of rubble, stone and stucco in 1838. The two-storey house has a main facade of five bays and a giant Ionic portico raised on a terrace marking its main entrance. The features include French windows and double doors with sidelights and a fanlight. At the rear two brick service wings partly surround rear walled gardens, with other outbuildings beyond. No other house was built in colonial Australia to equal the size of Clarendon which makes this property unique. The portico is also an unusual feature of a domestic building of the colonial period. A semi-basement housing domestic staff, offices and accommodation is also rare in Australia, relating more to English houses. It is the type of house where the 'upstairs and downstairs' principle applied.

Clarendon was built for wealthy woolgrower and merchant James Cox. He was the second son of William Cox who pioneered the first road over the Blue Mountains in New South Wales. Situated on the banks of the South Esk River, Clarendon has extensive formal gardens and beautiful parklands. In 1962 the property was given to the National Trust by Mrs W.R. Menzies. The first restoration was completed in 1966, and in 1974 it was restored to its original appearance by the addition of the portico and parapet. The house has been suitably furnished by the Trust. Generous assistance provided by the Commonwealth Bank of Australia, and the State Government of Tasmania, enabled the National Trust to purchase the outbuildings in 1987.

It is generally accepted that high restoration and maintenance costs come hand in hand with the ownership of heritage properties. Since purchasing the outbuildings in 1987 the Trust has had insufficient funds to secure the structures. As the disintegration process continues the stables and coach house are in urgent need of restoration and maintenance, as is the small cottage on the property which ultimately could be let to provide funds to assist in maintaining the property. The water system needs urgent attention as the water pumped from a nearby river is not suitable for drinking and the capacity of the existing pump is insufficient and cannot provide suitable irrigation for the extensive gardens or provide the essential water for fire fighting purposes. There is still major work to be carried out at Clarendon which is an ongoing Trust project.

The Old Farm at Strawberry Hill in Western Australia was built in 1831 by Dr Alexander Collie, the first Government Resident at Strawberry Hill, then a farming settlement which had supplied the nearby military attachments with vegetables since 1827. When Governor and Mrs Stirling visited in November 1931 a garden stocked with an abundance of cauliflowers, cabbages, beans, peas and almost every other edible vegetable was ready for their use. In 1832 Mr J.L. Morely leased the property where he grew wheat. In 1835 Sir Richard Spencer RN, KCH, with his wife and nine children arrived at the settlement and took possession of Government Farm as it was then known. It was described at the time as consisting of 'twenty-four acres more or less with the buildings, fences, erected thereon. Commonly known by the name of Government Cottage and Garden or Farm at Strawberry Hill...' and together with the improved adjoining 106½ acres was valued at 206 pounds and 14 shillings.

In the next ten years many improvements were made to the farm, with a two-storey extension added to the cottage in 1836 and the building of sheds, stables and barn carried out during that year. William Diprose was employed to build the extension, and many of the building materials used in the extension such as windows, flooring, store roofing and doors were shipped from England. In 1839 Sir Richard died, and not long after two sons also died in tragic accidents. All three were buried in a hillside grave not far from the house. In 1840 Lieutenant G.E. Egarton Warburton arrived with a detachment of the 51st Regiment in Albany. He married Augusta Spencer, daughter of Sir Richard and Lady Spencer, in 1842 and took up residence with her in Strawberry Hill after Lady Spencer and her three youngest sons left for England later that year.

Between 1855 and 1889 the farm was frequently unoccupied, and neglect and disrepair culminated in a fire in 1870 which destroyed the original wattle and daub house. The farm was subdivided by Joseph Spencer in 1886 and by 1889 the house was finally bought by Francis Bird for 1,500 pounds cash.

An architect, Francis Bird immediately began work on the restoration of Strawberry Hill—a difficult task after thirty years of neglect. The Bird family finally moved in on 18 December 1889. Mrs Bird changed the name of the property to 'The Old Farm' in 1890. Until 1956 the Farm remained the property of the Bird family.

When the Farm became the property of the National Trust in 1963, substantial parts of the main buildings had rotted away and much of the slate roof had to be replaced. 'The Old Farm' was gradually restored and refurnished as far as possible with the original furniture of the Spencer and Bird families and remains a monument to their pioneering work in the district. The Old Farm at Strawberry Hill was the first historic property in Western Australia to be restored and opened to the public by the National Trust.

Adelaide River Railway Station in the Northern Territory. The main station building was completed in 1889 to service the Palmerston (later renamed Darwin) to Pine Creek railway, the first stage of the former North Australia Railway.

Facilities at the Station included the passenger station with refreshment room and a goods platform. A pump station on the river, overhead tank and stand pipe provided water for the steam engines. A triangle, cattleyards, and loading race were added in 1925 at the northern end of the Station. Extensions made during the war included provisions for ambulance trains.

By the early 1980s the building was in a sorry state and was threatened with demolition. Local people involved the Trust in efforts to save it, resulting in its full restoration in 1986. The building was opened to the public 100 years to the day after the first train steamed into Adelaide River.

The Open House program is one of the major activities of the Trust and is part of the public educational role that National Trusts throughout Australia have established and are striving to maintain. National Trusts have established many national educational projects which have, in part, taken the following form:

- Heritage Week celebrations held during April each year, are planned around a national theme. In past years there have been themes such as: 'World Heritage' and 'Industrial Heritage'. The theme for 1991 will be 'Save the Bush'.

  Primarily Heritage Week is an awareness program sponsored and supported by a growing number of businesses, government bodies, conservation organisations, historic and cultural groups and community organisations in each State and Territory. Trusts include fund raising activities and membership drives in the program in their ever continuing efforts to promote and preserve Australia's natural, Aboriginal and historic heritage.

  Heritage Week is a week filled with activities to suit everyone. The week covers activities such as: seminars and lectures on conservation and heritage matters; official receptions; afternoon teas, dinners and balls; concerts and dance exhibitions; heritage and bush walks; tours of historic sites; property open days; re-enactments; historic transport rides; craft and antique fairs; processions; street theatre; photographic and art exhibitions; launching of education kits and books; school programs and even camel patrols in the Northern Territory.

- The Australian Heritage Award launched in 1986 with a five year national sponsorship from Jones Lang Wootton, was designed to recognise outstanding contributions to the preservation and promotion of Australia's heritage. The Award, which over the past five years has been a $10,000 cash endowment, is given for excellence in performance by an individual, association, government body or company.

  There is one annual Australian Heritage Award with the selection being drawn from ten categories. These categories are Government, Planning, Private, Publications, Media and Education, Cultural Conservation and Interpretation, Architecture, Nature Conservation, Contemporary and Individual. Over the past five years six Awards have been presented, including a special Australian Bicentennial Heritage Award. These were:

  1990 The Hyatt Hotel Canberra—Contemporary Category

  1989 'Southland: The Maritime Exploration of Australia'—Government Category
Western Australian Ministry of Education, Publications Section

  1988 Australian Bicentennial Heritage Award—Jointly awarded to:
'Nature of Australia'—ABC Natural History Unit
'Australians: A Historical Library'—Fairfax, Syme and Weldon Associates

  1988 'The Land of the Lightning Brothers'—Media Category
Australian Heritage Commission

  1987 Queen Victoria Building—Architecture Category
Rice Daubney, Stephenson and Turner (Architects in Association)

  1986 No. 1 Collins Street, The Olderfleet Buildings—Architecture Category
Bruce Trethowan, Robert Peck YFWK Pty Ltd.

- 'Heritage Australia' is the quarterly journal of the Australian Council of National Trusts. The articles in this quality publication include all aspects of Australian heritage—Aboriginal, natural and historic.

  State and Territory Trusts Newsletters, Journals and Magazines are produced to inform Trust members on the activities of each individual Trust giving up-to-date bulletins on conservation issues.

- Education Kits and Posters on 'World Heritage' (1989) and 'Save the Bush' (1990), both sponsored by the Department of the Arts, Sport, the Environment, Tourism and Territories, as well as individual State and Territory initiated projects like the Industrial Heritage Education Kit produced by the National Trust of Australia (Victoria) for Heritage Week 1990.
- Publications such as 'Australia in Trust', 'Lord Howe Island', Historic Buildings Book series and conservation bulletins to name but a few.
- There is a continuing program of conferences and workshops hosted by the Trust movement for example the international conference held in May 1990—'Heritage and Conservation: The Challengers in the Asia-Pacific Basin', with more workshops on various conservation subjects being planned for the future.
- Some State Trusts have established tour and real estate services for members and the general public alike. Tour services include educational tours overseas, excursions to other States and Territories and country areas, inspections of private and public properties, half day city walks and day trips. The real estate services, run in conjunction with licensed real estate agents, were formed in an effort to find sympathetic purchasers of properties with heritage value.
- Trusts also consult, on a regular basis, with government bodies, property developers, architects and property owners on proposals likely to affect places and buildings of historic, natural or Aboriginal significance.

The National Trusts are also involved with merchandising and have shops in properties and shop fronts throughout the States and Territories. A National Trust Committee develops and produces merchandise using the National Trust logo, however the shops are not restricted to selling only National Trust products and a wide range of merchandise can be found in the outlets.

These are only a few of the National Trusts activities and services. The Trust is a large organisation with a large agenda. It is the caretaker of Australia's heritage relying on public and government support and goodwill to ensure a continuing future for Australia's past.

For further information on the National Trusts of Australia please contact the Australian Council of National Trusts, PO Box 1002, Civic Square, ACT, 2608 or telephone (06) 247 6766, or facsimile (06) 249 1395.

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12

CULTURE, RECREATION, ENVIRONMENT AND TOURISM

Culture is essential to a shared sense of quality of life, and takes many forms. At a national level these forms range across cultural heritage, creative and performing arts, film and video, radio and television, sports and games, language and religious practice, adult education, active attachment to custom and place, and activities around the conservation and enjoyment of the natural environment.

Tourism is closely bound to cultural life. Cultural venues and events attract visitors; events and institutions are linked both to tourist patronage and to support from local populations; while a general perception of cultural vitality is an important factor in drawing visitors from overseas.

This chapter reviews cultural activity supported by the Commonwealth and its agencies, and by national non-government cultural organisations.

Statistics on travel and tourism, complementing the monitoring and promoting role of government, are also included.

CULTURAL HERITAGE

Australia's heritage is drawn from its cultural and natural environments. The cultural environment includes Aboriginal sites of all types—from cave paintings to fish-traps and carved trees. Historic places such as old residential and commercial buildings, shipwrecks, parks and gardens are also included. The natural environment ranges from national parks, nature reserves, habitats of endangered species and wilderness areas, to outstanding geological features and landscapes. Sites and objects of scientific, archaeological and social importance are also included.

The functions of identifying, cataloguing, surveying, conserving and protecting the national heritage are shared between governments and statutory authorities, with assistance from community organisations, such as the National Trusts in each State, and individuals.

Consolidated statistics relating to cultural heritage are not available, although information on specific funding programs, such as the National Estate Grants Program, and discrete activity by individual organisations is published in various annual reports and, for broader sectors, through the reports of special inquiries.

The Register of the National Estate, compiled and maintained by the Australian Heritage Commission, is the national list of all those parts of Australia's natural, historic and Aboriginal heritage which should be kept for present and future generations.

Governments support delineation and conservation of heritage material through the funding of public collections, the establishment of statutory authorities charged with providing policy advice and undertaking or sponsoring research, and administration of grants in support of heritage related activity.

While the Commonwealth Government works in partnership with State and Territory Governments, it also undertakes heritage activities on its own account where implications of these actions go beyond State or local boundaries; for example the nomination of sites for world heritage listing, the protection of Aboriginal heritage and advice about proposals which might affect the National Estate. These functions are administered by, respectively, the Department of the Arts, Sport, the Environment, Tourism and Territories; the Aboriginal and Torres Strait Islander Commission; and the Australian Heritage Commission.

Aboriginal Cultural Heritage

History

Aborigines have lived in Australia for at least 40,000 years. Before European settlement Aborigines left no written records, so deduction from archaeological and anthropological evidence is the principal process in amending and advancing new theories about their history.

Aborigines are generally thought to have come to Australia from the south-east Asian mainland and to have come to Australia over an island network that existed during the last Ice Age. The sea was then much lower and the greatest distance between islands probably only 60 kilometres. The sea travel that was undertaken by these early migrants is believed to be the earliest evidence of sea navigation by humankind.

Some scientists suggest, on the findings of early human skeletal types, that there may have been two or more migrations of different peoples who eventually merged to become modern Australian Aboriginal people.

For tens of thousands of years Australia was isolated from the island archipelagos to its north. In this time the Aborigines developed a materially simple but complex culture.

Aborigines lived as hunter-gatherers, often moving in a seasonal pattern between permanent or semi-permanent encampments. The types of foods hunted and collected varied widely but studies of Aboriginal foods have concluded that traditional diets were often nutritious and well-balanced.

Groups of people who spoke a common language held hunting rights and religious sanction over particular areas. The size of the pre-colonial Aboriginal population is not known with accuracy, but estimates range from 300,000 to more than one million. At the start of the colonial period there were about 200 languages and many more dialects.

Despite their linguistic diversity, Aborigines still share central themes in their traditions. They see humankind as part of nature. They identify, in a variety of forms, great creatures, heroes of a creation era generally referred to as the Dreamtime, which travelled through the land giving it form.

Although groups are bound to their local environment by systems of belief expressed in oral tradition, art, songs, dance and social relationships there is evidence of long distance travel for trade and ritual purposes. Traditional Aborigines have disciplined societies with complex kinship structures. Authority within small groups is held by older people who have earned the right to enforce laws.

Archaeology

Governor Arthur Phillip was the supervisor of the first excavation in Australia in 1788 when he had an Aboriginal gravesite opened and presumed from the ashes found that Aborigines cremated their dead.

But the archaeology of Aboriginal Australia did not become established as an academic discipline until the 1960s and the appointment of John Mulvaney to the Chair of Prehistory at the Australian National University in Canberra.

Since that time there has been a vigorous growth in the amount of archaeological research carried out in Australia.

Evidence has led to the general acceptance that Australia has been occupied by humans for possibly 50,000 years. A fossilised skull found in the Willandra Lakes area in South Australia has been dated using the electron spin resonance (ESR) technique as being between 30,000 and 50,000 years old.

Other claims have been made for an antiquity for human occupation in Australia in excess of 100,000 years, but the claims are not proven or widely accepted.

One of the more recent, is the claim of Dr Gurdip Singh from the Australian National University that a core from the bed of Lake George near Canberra, which shows a sudden increase in burning about 120,000 years ago, is evidence of human activity.

Dr Steve Webb of Bond University, who found a human skull fragment in the Lake Eyre region in 1988, has claimed that the fragment might be as old as 130,000 to 150,000 years. Analysis of the fluorine content of the bone fragment showed that it might be contemporary with extinct giant creatures which roamed Australia in the ice age.

Australian prehistory has a major place on the world stage and its practitioners have, in the past 28–30 years, increasingly been invited to participate in overseas publications, forums and conferences.

The contributions which Australian archaeologists are making are recognised as of relevance to global questions concerning human evolution, adaptation and cultural development.

Aboriginal people have been indicating for a long time that they wish to have control of their own heritage. There are a growing number of Aboriginal students of museum studies, conservation and prehistory.

Aboriginal heritage protection

The Aboriginal and Torres Strait Islander Commission has responsibility for the administration of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984.*

The Act preserves and protects places, areas and objects of particular significance to Aboriginal tradition. Initially enacted as interim legislation in June 1984, the Act was amended during 1986 to remove the clause relating to its expiration two years after enactment. The Act was amended in 1987 to incorporate provisions for the preservation of Aboriginal cultural heritage in Victoria.

The legislation complements existing State and Territory laws, and is intended to be used only as a last resort where those laws do not provide effective protection from injury or desecration for significant Aboriginal areas and objects.

Aboriginal art

Australian Aboriginal art represents possibly the oldest living continuous art tradition in the world and is the product of a culture which has developed over a period in excess of 40,000 years. Traditionally art was, and is, integrated with community life and the spiritual beliefs of Aboriginal people. The various forms of artistic expression, the visual arts, music, song and dance are inextricably connected and often serve to represent and enhance sacred stories and beliefs about the spirit ancestors who created and shaped the land and who gave to their descendants all sacred law, customs and ritual. *See also* Aboriginal cultural activity within this chapter.

Australian Institute of Aboriginal and Torres Strait Islander Studies

The Institute was originally established as the Australian Institute of Aboriginal Studies in 1964. In 1989 its Act was amended and it was retitled. Its functions are to promote Australian Aboriginal and Torres Strait Islander studies in areas such as the arts, education, languages, health, history, archaeology, sociology, anthropology, and contemporary social issues.

The Institute is now central to Aboriginal studies research. It is the largest library resource centre for information about the traditional and contemporary cultures and life styles of Aboriginal and Torres Strait Islander people. Tapes, pictures and photographs which are unique records of Aboriginal and Torres Strait Islander culture are preserved in environmentally controlled vaults. The movie collection is especially important.

The Institute supports research through the provision of grants and the employment of research staff, including visiting research fellows, and publishes some of the works resulting from the research and material from other sources. It publishes books on all aspects of Aboriginal studies: microfiche, musical recordings on disc and cassette, film and videos, a twice yearly journal, an annual bibliography of material accessioned into the library and an annual report.

National Estate

The Commonwealth Government, in conjunction with States and Territories, actively seeks the protection of Australia's national estate.

Australian Heritage Commission

The Australian Heritage Commission, established under the *Australian Heritage Commission Act 1975*, advises the Commonwealth Government on the protection of the National Estate. In summary, its responsibilities are to:

- prepare and maintain a register of national estate places;
- advise the Minister of the Arts, Sport, the Environment, Tourism and Territories on all matters relating to the national estate;
- advise other Commonwealth Ministers and authorities on Commonwealth Government proposals which might affect the national estate; and
- develop policies and programs for research, training and public awareness about the national estate.

The Australian Heritage Commission consists of a part-time chairman and up to six part-time commissioners with interests in the natural and cultural environment. The Commission is supported by a secretariat located in Canberra.

In 1989–90, the Commission's appropriation was $4.483 million, with a human resource allocation of 47 staff years.

Register of the National Estate

The Commission's major task is the development of the Register of the National Estate.

The term 'national estate' is a very broad-ranging concept. In the legislation, 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 generation.

It thus consists of all those places which have been identified as worth keeping and handing on to future generations. Such places include wildlife habitats, natural ecosystems, landscapes of great beauty, grand buildings and structures, humble dwellings, work places, ruins, sites of historic events and Aboriginal places such as dreaming tracks, rock art sites, ceremonial and archaeological sites. Portable objects, such as paintings and works of art are not included. Detailed criteria and processes have been developed by the Commonwealth as part of the procedures for identifying the national estate.

At 30 June 1990 the number of places in the Register of the National Estate totalled 9,146. Another 487 places were included in the Interim List.

Advising the Federal Government

The Commission recommends to its Minister, currently the Minister for the Arts, Sport, the Environment, Tourism and Territories, possible action required where major national estate areas are threatened; and provides advice to other Commonwealth ministers and agencies, inter alia:

- under Section 30 of the Act, where other Commonwealth agencies may be proposing actions which could have an impact on a place in the Register;
- on foreign investment proposals which could affect places in the Register;
- on the disposal of Commonwealth property where registered places could be involved;
- on environmental impact statements; and
- on other major national estate issues.

National Estate Grants Program

This Program is the Commonwealth Government's major financial contribution to the conservation of the National Estate and some $44 million has been allocated to more than 3,200 projects since the NEGP was introduced in 1973. The Program is designed to help the States and Territories, and organisations within them, to conserve the national estate. It operates by means of agreements between the Commonwealth and each State and the Northern Territory.

The Program is coordinated by the Australian Heritage Commission which has regular contact with State and Territory authorities responsible for heritage matters. The Australian Heritage Commission uses consequent documentation in its compilation and maintenance of the Register of the National Estate.

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 Research Program

In 1983, the Australian Heritage Commission established the Australian Heritage Research Program (AHRP) to fund major national surveys and deserving projects which directly assist the Commission to carry out its statutory role.

The objectives of the AHRP are to:

- increase understanding and further knowledge of the National Estate;
- identify and document places of national estate significance;
- improve documentation on places that are part of the national estate;
- generate, through studies, nominations of places for entry in the Register of the National Estate;
- conserve, improve and present the National Estate; and
- further training, education and information exchange on national estate issues.

During the year, the Commission made allocations over $500,000 under its own small research program, the AHRP. It also spent $700,000 on its community relations program which is designed to increase public awareness of national estate issues. Activities under the latter program included educational resources, publications, film production, workshops and seminars, the establishment of a national bibliographical database, Heritage Australia Information System (HERA), and the operation of a small specialised library.

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 interest.

The movement began in Australia in 1945, when the National Trust of Australia (New South Wales) was formed. In 1965 the Australian Council of National Trusts was formed to serve the national interests of the Australian Trusts which had by then been established in each of the country's eight States and Territories.

The Trust movement is the largest voluntary conservation organisation in Australia—membership is open to all individuals and organisations. National membership is approximately 80,000.

The conservation work of the Trusts is pursued through the identification of places of heritage value; public lobbying for heritage conservation; education programs; and through the direct conservation of places of heritage value. The Trusts own or control about 300 properties of a wide variety, including historic buildings, nature reserves, gardens, and even two paddle steamers.

The Trusts have established heritage registers which collectively list more than 23,000 places throughout Australia including buildings, urban areas, landscapes and industrial sites. In so doing, the Trusts are strongly committed to the preservation of the National Estate.

Historic shipwrecks

Around Australia's coastline lie many old shipwrecks of historic value. The oldest recorded shipwreck in Australian waters is that of the *Tryall* (1622), an English whaling vessel which sank off Western Australia.

Vessels which navigated oceans to reach Australia for trade, commerce and transport carried all the necessities to sustain life for the voyage. Many such vessels were wrecked and have been preserved to a greater or lesser degree in the seabed environment and are thus time-capsules revealing the customs and skills of an earlier age.

Notable examples are the old Dutch wrecks off Western Australia, the *Batavia* (1629), *Gilt Dragon* (1656), *Zuytdorp* (1712) and *Zeewijk* (1727) and the British ships *HMS Sirius* (1790), wrecked off Norfolk Island and the *Pandora* (1791), wrecked on the Great Barrier Reef.

Shipwrecks 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. Relics of international maritime heritage are worthy of protection, conservation and study. Their importance for education, recreation and tourism is recognised 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 the Arts, Sport, the Environment, Tourism and Territories. If the wreck is declared as being 'historic', the Minister is empowered to pay the finder a reward not exceeding $50,000.

Protection of Movable Cultural Heritage

The *Protection of Movable Cultural Heritage Act 1986* provides safeguards for the retention of those objects of the greatest heritage significance by requiring export permits for particular categories of objects of cultural significance which owners wish to send or take out of the country.

One category of objects, the loss of which would cause irreplaceable damage to Australia's cultural heritage, will not be allowed to leave, namely objects of Australian Aboriginal and Torres Strait Islander heritage comprising bark and log coffins, human remains, rock art, and carved trees.

Objects that may be exported (temporarily or permanently) at the discretion of the Minister for the Arts, Sport, the Environment, Tourism and Territories include:

- archaeological and ethnographic objects;
- Aboriginal heritage objects;
- objects of geological, scientific or technological interest;
- military objects;
- pieces of decorative art, fine arts, books, film and sound recordings;
- numismatic and philatelic objects; and
- objects of social history.

National Collections

The Commonwealth has maintained extensive collections since Federation. The establishment of the Historic Memorials Committee in 1911 and the establishment of the Australian War Memorial and the Australian Institute of Anatomy in the mid 1920s signalled acceptance by the Commonwealth Government of its role to acquire, display and maintain national collections. The collections of the Parliamentary and National Libraries had a similar early start.

Almost all government institutions since Federation have maintained collections in recognition of the nation's development and cultural identity, and of the value which future generations would place on them. Even comparatively new institutions such as the Australian National Gallery, the National Museum of Australia and the National Film and Sound Archive have origins going back some considerable time.

Australian War Memorial

The Australian War Memorial commemorates Australian servicemen and women who died as a result of wars or war-like operations, from the Sudan campaigns 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 the Eternal Flame. 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.

The Memorial also fulfils its commemorative role by being a significant museum, art gallery, and centre of research into Australian military history. It also houses one of Australia's finest military bookshops. The Memorial's vast and varied collections include over 50,000 war relics ranging from aircraft to commemorative badges, 25,000 works of art including oils, watercolours, drawings, sculptures and posters, as well as extensive valuable official and personal documents and audio-visual records. The Memorial houses 50 Victoria Crosses, the largest such collection in the world. The War Memorial and its surrounds were entered in the Register of the National Estate in 1981, and attract approximately one million visitors each year.

Australian National Botanic Gardens

The Australian National Botanic Gardens occupy a 90 hectare site on the lower slopes of Black Mountain in Canberra. Over 40 hectares of this site are developed at this stage.

Officially opened in 1970, they comprise the largest living collection of Australian native plants with over 6,000 species in cultivation. The associated herbarium houses over 200,000 specimens. An annexe of approximately 80 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. There are over 300,000 visits to the Gardens each year.

An Information Centre containing displays, leaflets and a bookshop, educational facilities and the Banksia Centre, with its special garden and activity programs for disabled people, are part of the community services offered by the Gardens to international, interstate and local visitors. An education officer is available to assist schools planning to visit the Gardens. The Gardens' collection of over 10,000 photographs of Australian native plants is available to publishers and researchers.

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.

The Australian Biological Resources Study (ABRS) which publishes the *Flora of Australia* and the *Fauna of Australia* is based at the Gardens.

Australian National Gallery—ANG

The Australian National Gallery is sited on Lake Burley Griffin in Canberra. Designed by Colin Madigan, it was officially opened in 1982.

The ANG's objective is to increase public awareness, appreciation and understanding of the visual arts in all media.

It is the Gallery's policy to acquire single works of art or collections of undisputed artistic excellence, and works which will complement existing public collections in Australia. The Gallery holds fine collections of Aboriginal Art; Australian Art (fine and applied); International Art (European and American); Asian Art; Arts of Oceania, Africa and the Americas; Photography; Prints and Illustrated Books.

One response to the Gallery's policy of greater public access has been the instigation of the Travelling Exhibitions program. Since its inception in 1988 six exhibitions have travelled throughout Australia.

The Gallery has an active education department which over the past year conducted specialised tours for 90,000 school children.

The Gallery's policy of maintaining the collection is serviced by a department of sixteen expert conservators.

National Museum of Australia

The National Museum of Australia was established under the *National Museum of Australia Act 1980*. In 1983 the Commonwealth Government accepted in principle the developmental plan for the Museum, and also selected a magnificent 88 hectare site on the shores of Lake Burley Griffin in Canberra. On current planning the Museum is expected to open in 2001, the centenary of Federation.

The Museum is a unique concept as a museum of national history. It will have three main themes: the history of the Aboriginal and Torres Strait Islander people; the history of Australia since the first European settlement; and the interaction of people with the Australian environment. The planning of the Museum's long-term development, and its exhibition and acquisitions programs in particular, have reflected the essential inter-related and complementary nature of these themes. The Museum's collections illustrate Australian social history and currently number approximately 200,000 objects.

The National Museum Visitor Centre was opened to the public in September 1986. The Centre's current exhibition, "More Than Meets The Eye", explores the marketing of Aboriginal culture to Australian and international audiences. A walking trail has also been developed on the Museum site.

For further details on the National Museum of Australia *see* the special article within *Year Book Australia* No. 72.

Australian National Maritime Museum

In June 1985 the Australian Government announced plans to establish a National Maritime Museum at Darling Harbour, Sydney. Its objective is to increase knowledge, appreciation and enjoyment of Australia's past and continuing involvement with the sea through the acquisition, preservation and presentation of Australian maritime history, including floating exhibits berthed at wharves:

- *Akarana*—an 1888 gaff rigged racing cutter and New Zealand's Bicentennial gift to Australia;
- *John Louis*—a pearling lugger;
- *Krait, Advance* and *Vampire*—a commando raider, patrol boat and a destroyer representing the RAN; and
- *CLS4*—an unmanned lightship.

At the Museum's opening in 1991 there will be six exhibition themes: Discovery—the finding of Australia; Passengers—the long sea voyage; Commerce—the working sea; Navy—protecting Australia; Leisure—sun, surf and sails; and Australia/USA—linked by the sea.

National Science and Technology Centre

In 1980 Australia's first hands-on science centre—Questacon—was established in Canberra under the auspices of the Australian National University. It attracted a great deal of attention nationally and this eventually resulted in the establishment of the National Science and Technology Centre.

In 1984 the Australian Bicentennial Authority submitted a proposal to the Government for the establishment of a national science centre and suggested that the Japanese nation be invited to consider, as its Bicentennial gift, contributing to its construction thus making it a joint Australia–Japan bicentennial project. The Japanese accepted the invitation and their Government contributed $5 million towards the cost of the building and this was matched by a similar amount from the Japanese private sector. The total capital cost of the building was $19.6 million.

In June 1985 the Government agreed to proceed with the establishment of a National Science and Technology Centre in Canberra. Construction commenced in June 1986 and the Centre was opened to the public in October 1988 with the official opening ceremony held on 23 November 1988. The building is located in Canberra's Parliamentary triangle only a short distance from the new and old Parliament Houses. It stands close to the shores of Lake Burley Griffin near the National Library of Australia, the High Court and the Australian National Gallery.

In September 1988 Questacon closed its doors, and its contents, goodwill and Explainer staff transferred to the new Centre. The Centre contains five galleries each of which currently contains a separate interactive exhibition. There is a 220 seat lecture theatre, a large workshop for the construction and maintenance of exhibits, a science shop and a cafeteria.

During its first twelve months of operation the Centre has attracted approximately 500,000 visitors. In addition the Centre has reached a wider audience through the operations of the Questacon Science Circus—a travelling exhibition which began in 1985. Since then the Circus has travelled extensively around Australia.

The Centre has already demonstrated that it is a powerful tool for influencing public thinking about science and technology. The Centre has only just begun to make its presence felt both in the national capital and, more importantly, throughout Australia. Its role is to continue to provide entertaining and instructive ways of introducing people to scientific concepts through the medium of interactive exhibits. The Centre's philosophy is to show the relevance of scientific concepts by illustrating how they are used in our society.

National Film and Sound Archive—NFSA

The National Film and Sound Archive collects and preserves Australia's moving image and recorded sound heritage. Its collection of film, television, radio and sound recordings ranges from the 1890s to the present day. The Archive also collects relevant documentation including photographs, posters, programs, sheet music, theatre slides, company and private papers, promotional materials and memorabilia.

Established in 1984 by the Commonwealth Government, the NFSA is located centrally in Canberra in one of Australia's finest Art Deco buildings. The Archive strives to increase awareness, appreciation and understanding of the nation's heritage and provides a range of access services to the media, researchers, educators and the public.

Recently the NFSA was able to increase its preservation activities with corporate sponsorship and Government funding. *Operation Newsreel* aims to preserve and document 4,000 issues of Australia's pre-1975 cinema newsreels over five years, beginning in 1989. The nitrate and lacquer disc preservation projects rescue decomposing films and sound recordings by copying to new, more stable, carriers.

An absorbing selection of the Archive's holdings is on display to the public in the Exhibition Hall.

As at 30 June 1989 estimated total holdings were: film cans and video—232,000; discs—728,000; phonograph cylinders—19,600; audiotapes—30,600; film, television and radio scripts—63,000; still photographs—350,000; posters—61,900; piano rolls—12,600.

For further information, *see* the article on NFSA within *Year Book Australia* No. 72.

LIBRARIES AND ARCHIVES

Australia has an extensive and well-utilised system of libraries, and a growing number of archives. A concentration of library functions appropriate to the national reference, curatorial and bibliographic services, and the national archival service for the Commonwealth administration, are provided by the National Library of Australia and the Australian Archives, respectively.

The National Library and the six State libraries are responsible for the acquisition and conservation of copies of all significant publications originating in the country or State. They also provide advice and support, inter-library loans and other extension services to other libraries; and research, information, and reference facilities and services to the public.

A public library system operates in each State, funded by local councils with some State assistance, and accessible to all. More specialised libraries are associated with higher educational institutions, government departments and agencies, and commercial, learned and professional organisations. Children have access to libraries at each level of schooling, funded by State Governments and supported by the efforts of parents and school bodies.

Archives are institutions whose primary function is the permanent preservation of unique records selected because of their administrative, financial, legal or other information value, and which are generally no longer required for the conduct of current activities by government agencies, non-government organisations or private individuals. While much archival work is an adjunct to other activity, a growing number of archival bodies, funded by governments and privately, and employing specialist staff, can be identified, serving legal, administrative and research needs of individuals and organisations.

This segment concentrates on library and archive services provided directly by the Commonwealth, usually in areas not otherwise served by State systems, or to service Commonwealth administrative and research requirements. It is concluded with a special article on book reading and borrowing, and library usage and holdings, based on a recent study carried out for the Literature Board of the Australia Council as its contribution to International Literacy Year.

National Library of Australia

The National Library of Australia was formally established in Canberra in 1961 when, by Act of the Australian Parliament, it was separated from the Commonwealth Parliamentary Library. The objectives of the library are to increase awareness, appreciation and understanding of Australia's cultural heritage through the development, preservation and promotion of the national collection of library materials; and to support the information and reference needs of Australian society by providing equitable access to nationwide information services and by fostering the coordinated development of those services both nationally and internationally.

The collections

The National Library collects Australian and overseas material giving emphasis to areas of the world of major significance to Australia's own political, social, economic and technological development. The collection currently contains 4.534 million volumes, including microform equivalents, together with: 204,279 serial titles; 40,125 paintings, drawings and prints; 511,520 photographs; 8,184 shelf metres of manuscripts; 150,415 music scores; 400,419 maps; 23,263 films and video cassettes; 563,843 aerial photographs; and over 45,565 oral history and folklore tapes.

The Library has notable Australiana collections, such as the Petherick collection acquired in 1911, the Cook manuscripts acquired in 1923, together with other significant collections including: the Mathews ornithological collection; the Ferguson collection; the O'Neill collection of children's literature; literary and personal papers of playwright David Williamson, entertainer Robyn Archer and the poet A.D. Hope; and the political papers of Dame Dorothy Tangney. The Esso Research Fellowship in the Performing Arts was funded in 1988 to establish the Archive of Performing Arts at the Library. The Library is a major partner in, and coordinator of, the Australian Joint Copying Project, which microfilms records relating to Australia, held in Great Britain and Europe.

A particular focus is given to the region, with Asian, South-East Asian and Pacific collections of world class. Other notable collections include the Harold S. Williams collection of western language material on the opening up of Japan, the McLaren/Hume collection on Korean history, the Luce collection on Burma, and the Tooley collection of rare maps of Australia and South-East Asia.

National bibliographic control

The Library is responsible for developing and maintaining the collection of printed material published in Australia, acquired under the deposit provisions of the *Copyright Act 1968*, and as the national bibliographic centre compiles and publishes the *Australian National Bibliography* (ANB). The Library is the Australian National Centre for the International Serials Data System (ISDS) which assigns International Standard Serial Numbers (ISSN) to Australian serials, and the Australian Agency for International Standard Book Numbers (ISBN). The Library's cataloguing-in-publication (CIP) program supplies Australian publishers with cataloguing data for inclusion in published works and provides for the early creation and dissemination of machine-readable records.

National Bibliographic Database—NBD

The NBD is created on a cooperative basis with other libraries and is used to produce the range of national union catalogues published by the Library in microfiche form. These include NUC:D (*National Union Catalogue of Library Materials for the Disabled*), NUC:N (*National Union Catalogue of Non-Book Materials*), NUCOM5 (*National Union Catalogue of Monographs*) formerly ABN Catalogue, and NUCOS (*National Union Catalogue of Serials*).

Online information services

The Library provides online information services in the life sciences (especially medicine) and Australian social sciences and humanities. They are delivered through two networks: the Australian MEDLINE Network (operated in conjunction with the Department of Community Services and Health), and the OZLINE Network. The OZLINE Network runs the Library's databases APAIS (*Australian Public Affairs Information Service*), AGP (*Australian Government Publications*), and ANB. Other databases include MAIS (*Multicultural Australia Information*), supplied by the Office of Multicultural Affairs, and CINCH, supplied by the Australian Institute of Criminology. Three new databases have been added recently: FAMILY (Family and Social Abstracts), AUSPORT on Australian sport and AHRR (Australian Historic Records Register).

Australian Bibliographic Network—ABN

ABN, the Library's principal resource sharing service, provides access to the National Bibliographic Database (NBD) of 7.1 million records, delivers cataloguing data to Australian libraries and enables libraries to share their cataloguing effort to achieve significant cost savings. ABN also provides online access to nationwide information about the location of library materials, and supports interlibrary loan management. In June 1990 ABN had 1005 members of which 459 were contributing data to the system. ABN can be accessed internationally.

Interlibrary lending

The Library operates a film and video lending service to organisations in Australia and participates in national and international interlibrary lending schemes. It makes monographs available on loan and supplies photocopies of serial and some other paper-based material not normally eligible for loan.

International and national coordination

The Library provides national representation on a number of international library and information organisations. These include UNESCO, the International Federation of Library Associations and Institutions (IFLA), the Conference of Directors of National Libraries, and the International MEDLARS Policy Advisory Group. The Library, in cooperation with other institutions contributes actively to the development and coordination of library and information services in Australia, playing an important role in areas such as resource sharing, preservation, standards, equity of access, and services to special groups, including Aboriginal people, people with disabilities, multicultural communities, and remote users.

Australian Council of Libraries and Information Services—ACLIS

ACLIS is the peak body in Australia representing libraries and information services as institutions. Its role is to offer advice to governments and other authorities responsible for libraries to facilitate cooperation and coordination of library services in the national interest, and to speak for libraries and information services on matters of common concern. It is governed by an elected National Council and managed by a full-time secretariat provided by the National Library of Australia. Its membership includes every large library in Australia and a large number of small libraries.

Other Commonwealth Libraries

Each government department or authority has a library or information unit to service its departmental needs. Some of these libraries are available for public use. Functions and holdings of some of the more important of these libraries are listed below.

Patent Office Library

The library of the Australian Patent, Trademarks and Designs Office in Canberra contains approximately 16,000 books and a wide variety of periodicals and other literature relating to science, technology, industrial property (patents, trademarks and designs), and law. The collection dates back to 1904, ensuring that its holdings of patent gazettes, journals and specifications are reasonably comprehensive. The Documentation Centre is separated from the Library and holds specifications of inventions received from international patenting authorities. Present holdings are estimated at 15 million with an additional 600,000 patent specifications received annually. Document back-up is available through the sales centre.

Australian and some foreign specifications and related material are also available at sub-offices in Brisbane, Sydney, Melbourne, Adelaide, Perth and Hobart.

Commonwealth Scientific and Industrial Research Organisation—CSIRO

The Information Services Unit (ISU), a component of the Corporate Services Department, was formed in 1988 by the amalgamation of the central library and information service with other information and communication services. Its objectives are to provide enhanced library, information and communication services for CSIRO scientists, and to contribute to improving the scientific and technical information services available in Australia.

The ISU complements and extends information programs in the CSIRO research divisions and is also the coordinating centre for the CSIRO library network of over 40 libraries in divisions located Australia-wide.

The Australian War Memorial Research Centre

The Centre preserves the records of Australia's participation in armed conflicts. Printed, audio and other 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; 500 hours of sound recordings; war posters; postage stamps; and currency. Official records and personal papers occupy 5,000 metres of shelving. Photographs covering World War I, World War II, the Korean and Vietnam wars number over 800,000, and there are about 600 kilometres of cinefilm. Facilities exist for reference and research.

Australian Heritage Commission Library

The Australian Heritage Commission operates a specialist library which aims to provide an information service, based primarily on published material, to the staff of the Commission and to those in the community interested in or working on heritage-related programs. Of special interest to educators is a small collection of videotapes.

The Library acquires and controls a collection of material, provides reference, current awareness and loan services, and provides bibliographic control of material through HERA (Heritage Australia Information System), a national, publicly accessible, online database.

HERA aims to record all references to Australian heritage publications produced after 1986. Particular emphasis is placed on reports written or commissioned by government and non-government heritage agencies throughout Australia. Among these are the reports prepared under the National Estate Grants Program (NEGP), the Commonwealth Government's major financial contribution to the protection of the National Estate. More than 600 NEGP reports are held in the Library, covering topics as diverse as geological monuments, wilderness areas, endangered fauna and flora, Aboriginal carved trees, contact sites, historic urban areas and buildings, mining history and abandoned settlements.

Commonwealth Parliamentary Library

The Library provides comprehensive information and research services to the Commonwealth Parliament through the Information Resources and Services Branch and the Parliamentary Research Service.

Information Resources and Services provides information and current awareness services to support all the aspects of the work of a parliamentarian. It maintains strong collections of resource material relevant to public policy issues and creates a number of specialised information files and databases. The Parliamentary Resource Service is organised around groups of subject specialists who prepare written and oral advice and analysis in areas of public policy of interest to the Parliament and its Members.

The collections total approximately 100,000 volumes with current annual acquisitions of 7,000 volumes. More than 9,000 current serial titles are received. The major publication of the Library is the Commonwealth Parliamentary Handbook, published once in the life of each Parliament. A series of information guides, briefing papers, acquisition lists, indexes and statistical publications are provided to Senators and Members.

Australian Bureau of Statistics Library

The ABS Library in Canberra has a complete set of ABS publications published since Federation and many State and colonial official statistics. It also has a large collection of material on statistical methodology as well as year books, census reports and statistical bulletins from many countries and international agencies. Statistics collected by the six State and colonial statistical bureaus from 1804 to 1901 are now available in the Colonial Microfiche Series. Central Office publications are available in the Historical Microfiche Series. Facilities in the Library are available to the public for reference and research. A smaller library exists in each State office.

Antarctic Division Library

The Australian Antarctic Division Library was established in 1950. As the nation's polar library, it specialises in antarctic and subantarctic material and, where relevant, information about the arctic. It provides library and information services to Antarctic Division staff at its headquarters in Kingston, Tasmania and at outposted sections, to ANARE (Australian National Antarctic Research Expeditions) at antarctic and subantarctic stations, and to individuals in Australia and overseas involved in polar research. The library supports Australia's antarctic objectives over its full range of activities including policy, research, operations, management and public relations.

The library is a repository for the important ANARE archive of station reports, voyage reports and ship log books, as well as rare and valuable polar materials, Antarctic Treaty Exchange documents, Antarctic Treaty Consultative Meeting papers, a significant national collection of Antarctic maps, charts and aerial photography, and Antarctic historical artifacts. Most of the material is located in the Head Office library of Kingston, Tasmania and at the four permanent stations, Macquarie Island, Casey, Davis and Mawson.

The Antarctic Division also maintains an extensive photographic and film collection dating back to the early years of ANARE.

Archives and Records

While general interest in archives in Australia was aroused following the celebration of the centenary of the colony of New South Wales in 1888, it was not until the twentieth century that measures were taken for the preservation, storage and servicing of original records. Initially, major libraries throughout Australia undertook the collection of historical records from both official and private sources. Today, archives and records organisations exist for government records at Commonwealth and State level. Some State and Territory archives were established, since 1961, as separate authorities (New South Wales, Victoria, South Australia, Tasmania and the Northern Territory). Others still operate broadly under State library control.

In addition, archives have been established by some churches, business corporations, universities and city councils. The Australian War Memorial collects private material concerning Australians at war and is also a custodian of certain official Commonwealth records relating to wars or war-like operations. Other corporate and private records continue to be collected by some of the State archives offices, libraries and universities.

Many of these bodies in the archives or records field are members of the Australian Council of Archives which provides a means of promoting cooperation on issues of common concern.

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. In 1974, the Commonwealth Archives Office was renamed the Australian Archives and a Director-General was appointed in 1975. Services to client agencies and the public are provided through a network of regional offices in all State capitals and in Darwin and Townsville.

The *Archives Act 1983*, which came into effect on 6 June 1984, 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 Commonwealth agencies, past and present. The Act provides for the gathering and provision of information about Commonwealth agencies and their records; the means by which the disposal of records is authorised; and for the storage and preservation of records.

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 1982*. Together, these two Acts provide a comprehensive system of public access covering all classes of Commonwealth records.

In 1987, following changes in Administrative Arrangements, the Australian Archives was placed within the Administrative Services portfolio. This change reflects the Australian Archives' role as a central service agency with responsibility for the Commonwealth government program concerning the management of all records generated by Commonwealth administration since Federation.

The Records Information Service (RINSE), a database of information about the structure and function of government agencies and their records, is held on the Australian Archives' computer and forms the basis of its finding aids. Information held on the database is accessible on-line (to Archives' staff and to Australian War Memorial staff), in paper and in computer-output-microfiche format. The microfiche forms the body of the first part of the Australian National Guide to Archival Material (ANGAM I) which is available to the public. RINSE and ANGAM I also incorporate information about Australian War Memorial holdings (previously known as ANGAM III). A separate database, ANGAM II, covers the public access status of items held by the Australian Archives, the Australian War Memorial and other Commonwealth agencies. It is available on microfiche and on-line to the public for item and subject searches.

In 1989–90 work continued to refine the computerised Physical Control System (PCS) first implemented in 1987–88. PCS provides a range of management information on the quantity, type, location, retrieval activity and destruction of records transferred to the Archives' custody.

At 30 June 1990 Australian Archives' holdings throughout Australia totalled 470,182 shelf metres of records, including 144,736 metres of permanent value material. In 1989–90, 2,184 official reference inquiries from agencies were received, 259,406 items were lent or returned to departments and authorities and 283,690 were consulted by officials in the repositories. During the same period 18,025 public reference inquiries were received and 26,718 items were consulted by the public in search rooms. The Australian Archives had an average staffing level of 386 for the year 1989–90.

Book Reading and Borrowing

In May 1990 the Australia Council published a report on borrowing and buying of books in Australia (Hans Hoegh Guldberg, *Books—Who Reads Them?*). The report includes findings from regional surveys of book buying, borrowing and reading in 1989, and assembles available data on libraries, publishing and retail of books including library directories edited by Alan and Judith Bundy, and primary data from the Public Lending Right data base. The material below is drawn from that report and from a survey conducted by the ABS of library usage in Tasmania in April 1987.

Book reading

Fifty four per cent of household respondents to the Australia Council survey were currently reading a book, which compares with the 1987 ABS finding that 64 per cent of the population in Tasmania had read at least one book in the month before the survey. The current book being read was as likely to have been borrowed from a library (30 per cent) as purchased (28 per cent). It might also have been borrowed from a friend (18 per cent), one had for a long time (14 per cent), or a recent gift (8 per cent).

Public libraries

In 1988 it was estimated that 98 per cent of the population had access to a public library, and 43 per cent were members of, or borrowers from, libraries. These figures, based on the Bundy library collections, are supported by the ABS 1987 Tasmanian library survey.

PERSONS AGED 12 YEARS AND OVER: PROPORTION WHO HAD VISITED A PUBLIC LIBRARY IN THE PREVIOUS TWELVE MONTHS BY AGE, TASMANIA, APRIL 1987
(per cent)

Age (years)	*Males*	*Females*	*Total*
12–14	61.2	73.8	67.3
15–19	43.6	58.1	50.8
20–24	28.1	38.4	33.3
25–34	36.3	48.1	42.2
35–44	35.9	54.1	44.9
45–54	32.7	48.0	40.3
55–64	36.4	39.7	38.1
65 and over	36.8	36.8	36.8
Total	**37.4**	**48.0**	**42.8**

From the Tasmanian survey it is estimated that 62 per cent of library users visited monthly or more frequently, with 15 per cent visiting fortnightly, and 12 per cent at least once a week. A similar frequency pattern was found in 1989 in the Australia Council survey of households covering three mainland State capitals.

While borrowing books is the primary reason for visiting a library, people use libraries for other purposes.

PERSONS AGED 12 YEARS AND OVER WHO VISITED A PUBLIC LIBRARY IN THE PREVIOUS TWELVE MONTHS: REASONS FOR VISITING LIBRARY(a), TASMANIA, APRIL 1987
(per cent)

Reasons for visiting(a)	*Males*	*Females*	*Persons*
To borrow library materials	82.0	88.8	85.9
To enquire at the reference desk	15.8	16.1	16.0
To use reference materials	39.8	29.9	34.2
To read newspapers	13.0	9.5	11.0
To read magazines	12.7	7.5	9.7
To see exhibitions/displays	11.2	18.9	15.6
For personal study	19.3	16.7	17.8
To use photocopier	18.3	17.6	17.9
Other(*b*)	16.6	23.0	20.2
Not stated	—	1.7	1.4

(*a*) Respondents were asked for all reasons for visiting libraries. Thus components add to more than 100 per cent. (*b*) Includes reasons—*to attend meetings, to watch films or listen to stories, to rest or relax, to use the telephone, to research family* history and others.

Library Bookstock

Book stock in public libraries increased at an average annual rate of 4.4 per cent between 1978 and 1987, the last year for which statistics were compiled by the Australian Advisory Council on Bibliographic Services (AACOBS), since merged to form the Australian Council for Library and Information Services. The 27 million books held in 1987 were distributed among 497 library organisations servicing 1,804 locations. The spread of locations reflects the different geographic arrangements of population across States, Western Australia, South Australia and Queensland having a much higher number of libraries per head of population than other States. The libraries in those States are also much smaller.

Staffing

In 1986 public libraries in Australia employed 4,962 staff expressed as full-time equivalents, or 10 staff per library organisation, and 3 staff per location. Libraries in Western Australia, South Australia and Queensland employ, on average, fewer than six staff each, compared to 19 and 23, respectively, for New South Wales and Victoria. Thirty-three per cent of staff employed in libraries have professional qualifications.

Foreign language books

With 12 per cent of the population born in non-English speaking countries and 13 per cent speaking a language other than English at home (as measured in the 1986 Census), some attention needs to be given to the stocks of foreign language books in public libraries.

In 1986 (Bundy and Bundy *op cit.*) libraries stocked an estimated 438,000 books in languages other than English. This stock however is not uniformly represented in the States: over 60 per cent is located in Victoria, where it accounts for 4 per cent of total library stock in that State; in other States only New South Wales (1.2 per cent) had comparable levels of stock. In Australia as a whole foreign language books constitute 1.7 per cent of all library book stock.

Books in Italian, Greek and Spanish account for more than 50 per cent of this stock; other languages in order of representation are German (9 per cent), French and Turkish (both 6 per cent), and Vietnamese, Dutch and Arabic (all 4 per cent); and material in many other languages, but in much smaller quantities.

These proportions can be compared with the representation of non-English languages among the 2 million people speaking languages other than English at home.

DISTRIBUTION OF NON-ENGLISH LANGUAGE BOOKS IN PUBLIC LIBRARIES AND NON-ENGLISH SPEAKERS AND READERS

		Non-English language			
		Speakers(b)		Readers(c)	
Language	Book stock(a) per cent	per cent	'000	per cent	'000
Italian	27.5	20.6	405.0	19.5	368.1
Greek	17.3	13.6	267.1	10.2	192.5
Spanish	9.8	3.5	70.1	3.6	67.9
German	8.8	5.6	109.4	13.6	256.9
French	5.9	2.6	51.4	14.7	277.9
Turkish	5.6	1.6	31.2	*	*
Vietnamese	4.3	3.0	59.4	1.6	29.8
Dutch	4.1	3.1	61.4	3.7	70.7
Arabic	4.0	5.4	106.0	2.8	53.8
Polish	2.3	3.4	66.2	3.1	58.9
Russian	2.2	1.1	21.7	*	*
Czech	1.2	0.5	9.7	*	*
Chinese	1.2	6.7	130.8	3.0	57.3
Maltese	0.9	2.9	57.8	1.4	27.2
Serbian, Croatian	1.7	3.4	66.6	4.2	78.8
Other Yugoslav	0.7	5.9	116.5	2.4	46.2
Other	2.5	17.1	335.4	15.3	289.7
Total	**100.0**	**100.0**	**1,965.7**	**100.0**	**1,888.1**

(a) Proportion of all public library non-English language holdings 1986, Bundy and Bundy. *(b)* Persons aged five years and over who spoke a non-English language at home, 1986 Population Census. *(c)* Persons aged 15 years and over who read a non-English language (either acquired or first spoken), May 1983 *ABS Language Survey* (4504.0).

Academic and Research Libraries

Complementing public and school libraries are libraries attached to academic and research institutions. The table below lists holdings at 1987 from 341 academic and research institutions, including Australia's 20 universities and 48 colleges of advanced education (as they then were).

ACADEMIC AND RESEARCH LIBRARIES, 1987

	Institutions	Locations	Librarians	All Other Library Staff	Total
New South Wales	117	179	538	947	1,485
Victoria	79	143	508	948	1,456
Queensland	50	82	239	449	688
South Australia	37	59	133	280	413
Western Australia	30	53	161	297	458
Tasmania	14	28	52	92	144
Northern Territory	7	10	20	29	49
ACT	7	20	106	237	343
Australia	**341**	**574**	**1,757**	**3,279**	**5,036**

Source: Bundy Academic and Research Libraries.

ACADEMIC AND RESEARCH LIBRARIES, STOCK AND LENDING, 1987
('000)

	Monographs		*General and short loans*	*Interlibrary loans*	
	In stock	*Acquired*		*In*	*Out*
New South Wales	7,817	291	4,551	70	93
Victoria	6,718	313	4,614	71	76
Queensland	2,640	126	2,256	44	42
South Australia	2,515	77	1,223	23	19
Western Australia	1,766	66	1,016	30	34
Tasmania	682	24	354	8	6
Northern Territory	220	20	112	3	1
ACT	1,857	83	846	15	17
Australia	**24,215**	**1,000**	**14,972**	**264**	**288**

Source: Bundy Academic and Research Libraries.

CREATIVE ARTS

The arts in Australia receive considerable financial support from the Commonwealth Government both in the form of direct grants and through the provision of taxation benefits. This support is complemented by State, Territory and local governments. Governments provide funds for virtually all aspects of creative artistic life. Major arts facilities have opened in Canberra, Sydney, Melbourne, Brisbane, Perth, Adelaide and Darwin. The number of regional art museums and performing arts centres has increased in recent years. In the past decade the number of major international art exhibitions touring capital cities has increased. Community and folk arts have gained recognition, and the Australian film industry is emerging once again as a major contributor, in economic and artistic terms, to Australian cultural life.

The activity of governments in encouraging and supporting culturally important activities is complemented by non-government sponsors, organisers, entrepreneurs and patrons of the arts. Private and corporate investment in the arts is being encouraged, and joint ventures between government and corporate sponsors for large scale events, tours or exhibitions are not uncommon.

National Activities

The Commonwealth Government formulates policy guidelines for the support of the arts generally and allocates funds annually to the national cultural institutions under its jurisdiction. Commonwealth–State consultation on cultural matters takes place through the Cultural Ministers Council.

Cultural Ministers Council

The Cultural Ministers Council is the ministerial forum on cultural activities in Australia.

The Council, established in 1984, provides a forum for the exchange of views on issues affecting cultural activities in Australia. It consists of the Commonwealth, State and Territory ministers responsible for the arts and cultural heritage. New Zealand and Papua New Guinea ministers with responsibility for the arts are invited to attend meetings as observers.

For the purposes of the Council, cultural activities are defined as: creative arts; performing arts; cultural heritage, including collecting institutions; libraries and information services; and film.

Working Groups have been established by the Council to undertake various studies, including the Statistical Advisory Group, Orchestras' Working Group, and working groups on a framework for cultural development, heritage collections, touring and access, and international cultural activities.

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 artform boards.

In May 1987, the Government announced changes to the structure of the Australia Council in response to the Report of the House of Representatives Standing Committee on Expenditure Inquiry into Commonwealth Assistance to the Arts (the *McLeay Report*), to revitalise arts support mechanisms and policies for the next decade. Under the new arrangements, the Council consists of fifteen members made up of the Chair of Council, all chairs of Boards, arts practitioners and representatives of the broad public interest, and Council's General Manager as an ex-officio member. The number of artform boards has been reduced to three—literature, visual arts/craft (including design), and the performing arts. The former Aboriginal Arts Board has been replaced by an Aboriginal Arts Committee pending a review of Aboriginal arts funding arrangements in 1990.

Community cultural development

A Community Cultural Development Unit was formed in July 1987 to elevate the Council's community arts focus and provide for integration with the activities of the artform boards. A committee of Council now has ultimate responsibility for community arts development, and assists community involvement by encouraging the closer integration of arts practice into everyday life, and the growth of an independent culture that reflects the diverse composition of Australian society.

The Community Cultural Development Unit also administers programs in support of Multicultural Arts, Youth Arts, Touring and Access, and Art in Working Life.

ALLOCATION OF FUNDS FOR PROGRAMS, BOARDS AND ADMINISTRATION OF THE AUSTRALIA COUNCIL, 1989–90
($'000)

Support for Artform Development	
Literature	3,919
Performing Arts*(a)*	32,583
Visual Arts/Craft	6,650
Total	*43,152*
Support for General Arts Activities	
Aboriginal Arts	3,370
Community Cultural Development	5,158
General Council Programs	2,137
Total	*10,665*
Total Support for the Arts	53,817
Administration	7,528
Total appropriation	**61,345**

(a) Includes $6,248,658 for The Australian Opera; $2,643,033 for the Australian Ballet Foundation and $2,562,910 each for the Australian Opera and Ballet Orchestra and the State Orchestra of Victoria.

Aboriginal arts

The Council's Aboriginal Arts programs support activities involving the preservation and continuation of traditional cultural practices of the Aboriginal and Islander people and their associated artforms, as well as the generation of new artistic expression among Aboriginal and Islander people in urban and country areas.

Literature

The Literature Board encourages all forms of Australian creative writing in English and other languages 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.

Performing arts

The Performing Arts Board facilitates consideration of issues common to all the performing arts such as training, performance venues and administration. The board also continues to encourage and support the development of music in Australia and the promotion of Australian music and musicians overseas, and the development of performance, content and production of dance, drama, puppetry, mime and young people's theatre, which stem from and relate to the Australian experience.

Australia has eight fully professional orchestras managed by the Australian Broadcasting Corporation, namely a symphony orchestra in each State capital city and two orchestras, the Australian Opera and Ballet Orchestra and the State Orchestra of Victoria, predominantly engaged in work with the Australian Opera (Sydney) and the Australian Ballet (Melbourne). The Board provides continuing support for some 80 drama, dance, puppetry, mime and youth companies, and provides opportunities for professional theatre people to develop their skills, encourages growth in theatre attendance and promotes community involvement in live theatre.

Visual arts/craft

The Visual Arts/Craft Board has been designed to link related, but distinct artforms. The Board provides assistance to individuals and organisations working across a wide spectrum of the visual arts in Australia, from painting and sculpture to museology. 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.

In the area of crafts, the 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.

Other Commonwealth Schemes in Support of the Arts

Artbank

Artbank is a unit of the Department of the Arts, Sport, the Environment, Tourism and Territories, set up to encourage contemporary young Australian artists by acquiring their work, and to stimulate a wider appreciation of Australian art by making it available for display in public locations throughout Australia and in official posts overseas. Since its inception in 1980, the Artbank collection has grown to more than 6,000 works, including paintings, artists' prints, sculpture, photography, Aboriginal art, and craft. Approximately 1,800 artists are represented in the collection.

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.

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 to record 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

Under the scheme introduced in 1979 the Commonwealth indemnifies material in national and international touring exhibitions against loss or damage of the works involved. The scheme enables the Australian public 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 some Australian exhibitions travelling overseas, for which indemnity is not available from the host country and which could not otherwise proceed.

Twelve major exhibitions were indemnified in 1989–90 at a total value of $335 million.

International Cultural Corporation of Australia Limited—ICCA

ICCA was established by the Commonwealth Government in 1980 as a non-profit public company to arrange and manage cultural exhibitions and events.

The Australian Government provided seeding funds totalling $1 million between 1980 and 1983, but since then the Corporation has been self-supporting. ICCA has attracted $14 million of sponsorship support from 72 companies in the corporate sector and 16 public sector sources; over $23 million from admissions to exhibitions, more than $14 million from merchandising and over $4 million from investments and grants.

Its principal activities are three-fold. Firstly, working in close collaboration with Australian and overseas galleries and museums, it manages significant exhibitions of artistic, cultural and historical interest. Secondly, it works with the Australian Government to send Australian exhibitions overseas. Thirdly, it offers consultancy and advice to the Commonwealth Government, State Governments and overseas governments, and to galleries and museums.

ICCA works closely with the Department of the Arts, Sport, the Environment, Tourism and Territories which is the manager of the Australian Government's indemnity scheme. ICCA also works with the Department of Foreign Affairs and Trade and other government and cultural agencies in Australia and overseas. Its continuing contractual partners in exhibition activities are the Australian galleries and museums.

To date, the Corporation has managed 37 exhibitions. Total audiences have exceeded 6 million. Exhibitions managed by ICCA have included *The Entombed Warriers* from China, *Philip Guston* from the United States, *Pop Art* from the Museum of Modern Art, New York, *Picasso* from Europe, *Gold of the Pharaohs* from Egypt, *Ancient Macedonia* from Greece, *Golden Summers, The Age of Sultan Suleyman the Magnificent* from Turkey, and *The Great Australian Art Exhibition* from Australia.

Public Lending Right Scheme

The Public Lending Right Scheme, established by the Commonwealth Government in 1974, makes compensatory payments to Australian authors, illustrators, translators, editors 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 eligibility criteria. The *Public Lending Right Act 1985*, placing the Scheme on a statutory basis, began operation on 1 July 1987.

In 1989–90 the Government provided $2.96 million for payments, administration and salaries. The scheme's 1989–90 payments to eligible claimants totalled $2.75 million. Payments to authors and publishers are based on annual sample surveys of book stocks of public lending libraries throughout Australia.

Other Arts Organisations

Arts Council of Australia

The Arts Council of Australia is a national federation of community arts based Arts Councils. Each State division is funded through the Australia Council and their respective State Government.

The Arts Council of Australia is administered through the State office in which the Federal President resides. (For 1990–91 the federal office is with the Northern Territory Arts Council.)

The Council acts as a coordinating body for the activities of the States. These programs cover a wide range of community arts activities initiated by local Arts Councils, an extensive program of professional performances in schools and tours by major theatre companies to towns and cities outside the capitals.

There are now about 300 Arts Councils around Australia. Each local Arts Council initiates its own program of activities which are supported by the State Offices.

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 been accorded to most of the performing companies established by the Trust. The Trust's major function is to provide services to the arts community around Australia. In particular, the Trust has active programs of audience development (particularly tourists), business sponsorship advocacy and nurturing of developing talent. The Trust provides tax deductions for over 700 eligible arts organisations as well as providing an industry superannuation service, an industry insurance service and an industry advertising and marketing service.

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.

The Australian Ballet

The Australian Ballet, established in 1961 as the national classical ballet company of Australia, first performed in Sydney on 2 November 1962 and was registered as an incorporated company in 1970.

Sixty dancers perform on stage backed up by 41 artistic, music, production and theatre staff and 35 marketing, publicity, administrative and finance staff—a total of 136.

The Australian Ballet gives about 185 performances every year in the Australian cities of Sydney, Melbourne, Brisbane, Adelaide and Perth and has toured overseas regularly:

1965	Royal Opera House, Covent Garden, London and Baalbeck, Lebanon
1967	North and South America
1968	South East Asia

1970–71	United States of America
1971	Singapore and Philippines
1973	USSR, Eastern Europe and London
1976	New York, Washington, London and Philippines
1978	Jakarta
1979	Greece, Israel and Turkey
1980	The People's Republic of China
1981	Mexico
1987	Japan and China
1988	USSR, London and Athens
1989	Taiwan, Thailand and Singapore
1990	New York, Washington and Orange County.

The Commonwealth Government and State Governments of Australia provide yearly grants to the Australian Ballet, contributing 22 per cent of its total income, but its main source of revenue is ticket sales which bring in more than $7 million. Many businesses and commercial organisations provide sponsorships which total in excess of $1 million. Operating costs exceed $12 million per annum. Orchestras for Australian performances are funded by government grants and conducted by the Australian Ballet's music director and guest conductors.

Festivals

Festivals devoted solely or partly to the arts now total about 300 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.

The Australian Opera

The Australian Opera is the largest performing arts organisation in Australia, employing more than 200 permanent staff including 31 principal artists and a chorus of 50. In addition it employs more than 500 casuals each year, including a number of celebrated international singers. The projected budget for the Opera in 1990, excluding the cost of orchestras, was more than $27 million, derived mainly from the following sources—61 per cent box office and other earned income, 29 per cent government subsidy and 10 per cent private contributions. The Opera, with headquarters in Sydney, tours annually to Melbourne and frequently visits other centres. In 1991 it will give 215 performances of 17 operas on Australian stages. Opera performances in the parks and television activities are used by the company to provide all Australians with access to opera.

Musica Viva

Musica Viva Australia is Australia's national chamber music entrepreneur. A non-profit company founded in 1946, it presents concerts mainly of chamber music but also of other types of fine music by Australian and overseas artists.

Musica Viva receives subsidies from the Performing Arts Board of the Australia Council and several State Governments, with the balance of its income coming from ticket sales, sponsorship and donations.

It also manages tours by Australian artists overseas, often in association with the Department of Foreign Affairs and Trade, operates an extensive program in education, and commissions new music from Australian composers. In 1990, Musica Viva presented over 2,000 concerts throughout Australia and overseas.

Film and Television

The Commonwealth Government provides direct and indirect support to the Australian film and television production industry. The following funds were allocated to film-related organisations in 1989–90:

- Australian Film Finance Corporation—$54.8 million;
- Australian Film Commission appropriation—$16.1 million. In addition, $3.2 million expected from self-generated funds, giving a level of activity of $19.0 million;
- Australian Film, Television and Radio School—$8.9 million; and
- Australian Children's Television Foundation—$0.6 million.

Australian Film Commission

The Australian Film Commission is a statutory authority established in 1975. Its stated objective is to foster a stable and diverse Australian film and television production industry of quality, encourage the production and distribution of Australian programs and promote the commercial potential, cultural diversity and benefits of Australian programs both domestically and internationally.

During 1988–89 national film production comprised 22 features, 8 telemovies and 16 mini-series for approximately $107.5 million. (This does not include all non-10BA nor drama serials production.)

In 1988 cinema admissions amounted to 33.4 million attendances. Australian films claimed 17.3 per cent of the gross box office receipts.

Film Australia Pty Ltd

Film Australia, the nation's film and television production house, formerly a division of the Australian Film Commission, has been re-established as a wholly Commonwealth-owned company to operate as far as practicable along commercial lines. The national film production house, now known as Film Australia Pty Limited, traces its roots back to 1911 when the Commonwealth Government appointed its first cinematographer. It was incorporated in the Australian Capital Territory on 24 May 1988 and commenced operations on 1 July 1988.

Film Australia's role in the community and film industry is to make films and videos which reflect aspects of the Australian way of life and Australia's relationship with the world. It also offers new filmmakers the opportunity for production experience in a professional environment, and allows established film makers the chance for experimentation and the practical development of ideas and techniques.

Film Australia produces approximately 100 film and video titles a year. It maintains the largest Australiana stock-shot library in the world, with around two million metres of film, including archival material.

Australian Film Finance Corporation Pty Ltd

On 25 May 1988 the Government announced its decision to establish the Australian Film Finance Corporation. Officially incorporated as a company on 12 July 1988, and with a budget allocation covering the next four years, the Corporation is to invest in feature films, documentaries and television dramas, including mini-series and telemovies. Special attention will be given to children's television.

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 the Arts, Sport, the Environment, Tourism and Territories.

Qualifying Australian films are feature films and films of a like nature for television (telemovies); documentaries; and mini-series of television drama. They must be produced principally for public exhibition in cinemas or on television, be substantially made in Australia and have a significant Australian content.

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 educational and informational activities. The Foundation receives assistance from the Commonwealth Government, and all State and Territory Governments. In 1989–90, $0.57 million was provided by the Commonwealth with a matching contribution sought from the other participating governments on a 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 as part of the Office of Film and Literature Classification, created in April 1988. A regional Censorship Office is located in Melbourne.

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; and/or
- 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 or Territory legislation may be appealed to the Film and Literature Board of Review. The Censorship Board also classifies sale–hire videotapes pursuant to State or Territory legislation. These decisions may likewise be appealed to the Film and Literature Board of Review.

Feature films

In 1989, 539 cinema feature films were processed. Five feature films were refused registration. There were 13 appeals, of which eight were dismissed. Of the 539 features, 31 were classified For General Exhibition ('G'), 124 Parental Guidance ('PG'), 269 For Mature Audiences ('M') and 55 For Restricted Exhibition ('R'). Permission to import for use at approved events including film festivals was granted to 160 films, and 50 were passed subject to special conditions.

The principal countries of origin were the United States of America (226 films), Hong Kong (81 films), the United Kingdom (45 films), Australia (36 films), West Germany (25 films), and Japan and France (23 films each).

While the 'M', 'PG' 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.

Videotapes

The Board examined 3,071 video features for sale or hire in 1989. There were three appeals, two of which were upheld and one dismissed. 924 feature titles were classified 'G', 496 'PG', 749 'M', 270 'R' and 597 'X'. Thirty-five were refused classification. The 'X' classification, which applies to videotapes containing non-violent explicit sexual material, is accepted only in the ACT and Northern Territory.

Professional Training in the Arts

Professional training in the arts in Australia covers a broad range of resources. Training is available through formal programs in TAFE, advanced education and university level courses. There are also a number of on-the-job training programs available in the arts and many organisations offer in-house training programs for their staff. The last decade has seen the development of multi-disciplinary tertiary arts training institutions in some States.

Arts Training Australia

This national organisation was established in 1986 to address vocational training needs in the arts industry. It is not a training organisation in itself, but aims to ensure that current training programs are meeting present and future needs of those involved in the arts.

Arts Training Australia represents a wide range of national employer organisations, unions and professional associations active in the industry. It undertakes research projects which examine the specific training needs of the differing industry sectors, ranging from architecture and design, performing and visual arts to writing and publishing, film, television, radio and heritage. It also assesses the relevance of non-accredited privately-run courses to the needs of the industry and coordinates national curriculum development programs.

Through its branch network the organisation liaises with the Commonwealth Government and State Governments, educational institutions and others in policy making for arts training. It provides advice to Government on the industry's training requirements, as well as participating in wide-ranging debates on industry training matters.

Australian Film, Television and Radio School

The School was established in 1973 as an Australian Government statutory authority. It is responsible for providing advanced education and training for industry professionals, as well as the development, through its full-time and short courses, of new and emerging talent in the film, television and radio industries.

The School undertakes, coordinates and disseminates research in connection with the production of programs. Training needs are assessed and employment trends in the industry are evaluated. The School maintains an extensive library of print and non-print material related to film, television and radio. It also has an extensive publishing program and supplies educational resource material.

National Institute of Dramatic Art—NIDA

The Institute 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 arts entertainment industry by assisting students to develop the craft skills, cultural background and personal discipline required for successful careers in their chosen field.

The Institute's students number 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.

RECREATION, FITNESS AND SPORT

The Commonwealth Department of the Arts, Sport, the Environment, Tourism and Territories has a general responsibility in the national sphere for recreation, fitness and advice on sport 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.

National Activities

The Sport and Recreation Ministers Council (SRMC) provides the major mechanism for liaison between the Commonwealth Government, State and Territory Governments on matters concerned with sport and recreation in Australia. The Council is a forum for consultation and cooperation between the respective Governments, and its membership comprises the ministers with prime responsibility for sport and recreation. Both New Zealand and Papua New Guinea have observer status on the Council.

The SRMC is assisted by the Standing Committee on Recreation and Sport (SCORS). The Department provides secretariat support to the Council, the Standing Committee and its subcommittees.

Standing Committee on Recreation and Sport—SCORS

The Standing Committee comprises representatives from the Commonwealth, State and Territory departments or agencies responsible for sport and recreation. It has established two permanent subcommittees, the Subcommittee on Fitness and the Consultancy Fund Subcommittee. The objectives of the Subcommittee on Fitness are to:

- provide a mechanism by which the Commonwealth, State and Territory departments can support and assist each other in developing fitness programs;
- provide advice to SCORS on:
  - matters relating to fitness;
  - areas of cooperation in planning, implementing and evaluating fitness programs, facilities and services;
- undertake specific tasks in the area of fitness as directed by SCORS; and
- initiate, in conjunction with other agencies where appropriate, approved projects relating to fitness.

The Consultancy Fund Subcommittee is generally responsible for advising SCORS on the operation and management of the SRMC Consultancy Fund. The Consultancy Fund has been established jointly by the Commonwealth Government, and the State and Territory Governments to enable the Council to undertake on a cooperative basis projects of common interest.

The Consultancy Fund Subcommittee is responsible for:

- advising SCORS on an annual program to be funded from the SRMC Consultancy Fund;
- implementing projects in accordance with the approved funding program;
- monitoring the progress of projects and presenting reports and recommendations; and
- advising SCORS on the dissemination and publication of the results of such projects.

Projects recently funded from the Consultancy fund include: the preparation of a management manual for recreation centres; a study into sport and recreation for people with disabilities; and the preparation of a publication on sports administration.

Community recreation and sporting facilities

The Community Recreation and Sporting Facilities Program was introduced in the 1988–89 Commonwealth Budget. The Program aims to provide financial assistance to State/Territory and local government authorities and other community groups to supplement that available from other sources for the development of high priority community recreation and sporting facilities.

Priority is given to projects addressing the needs of residents in inner urban areas, new suburban areas, youth, rural communities, communities with high unemployment, and communities with large migrant populations.

Almost 2,000 applications, seeking over $200 million in Commonwealth assistance, have been received in the first two years of the Program. The Minister for the Arts, Sport, the Environment, Tourism and Territories has announced the allocation of 382 grants, totalling almost $13 million, to projects across Australia.

The type of projects assisted through the Program range from the shade covering of swimming pools in sub-tropical areas, to the resurfacing of tennis courts in small rural communities, to the provision of indoor bowling facilities for older adults to horse-riding facilities for people with disabilities.

Recreation and fitness assistance

The Recreation and Fitness Assistance Program (RFAP) provides for the development of programs, resources and the collection and dissemination of information that will assist the provision of safe and satisfying recreation and fitness opportunities. In 1989–90, a total of $2.5 million was allocated to the Government's recreation, fitness and water safety programs to enhance the opportunities for all Australians to participate in healthy, safe and satisfying leisure activities. Of this amount $730,000 was provided for a range of projects which aim to increase participation in safe recreation and fitness activities. Major initiatives funded through this Program in 1989–90 are described below.

Recreation projects

Recreation Industry Study

In 1988 the Department commissioned a study to review the effectiveness of tertiary recreation education. The report recommended, among other things, that the Department should collect information on the recreation industry to assist future labour force and educational planning. The study will:

- define the recreation industry;
- develop a statistical framework to guide the collection of industry and other data; and
- survey employers and employees.

Recreation Education at the Tertiary Level

A study commissioned in 1987–88 into the effectiveness of recreation education was completed in September 1989. A national seminar was held in Canberra in May 1990 to discuss the recommendations of this study and to initiate appropriate follow-up action. The seminar was attended by representatives of the Commonwealth Government, State Governments, local governments, unions and professional associations, and tertiary institutions, including Technical and Further Education.

Aboriginal recreation

Following two seminars held on the recreation needs of Aboriginal people, a study has been commissioned into the concept of recreation as perceived by Aboriginals, encompassing a discussion of the types of activities considered to be desirable recreational pursuits, the preferred methods for delivering such activities in Aboriginal communities, and the role of the trained recreation worker in an Aboriginal community.

Youth recreation

Research undertaken previously on behalf of the Department identified that young people living in rural areas were seriously disadvantaged in terms of access to recreation opportunities. In particular, it was indicated that a major problem for non-metropolitan youth is access to a range of low cost recreational opportunities. An information kit titled *It's Up To Youth* has been produced, directed at overcoming these difficulties faced by young people living in or near towns with a population of less than 10,000, and those living in more isolated areas. A complementary resource addressing recreation opportunities for young people in the urban environment is being produced.

In addition, a summary of the main points from the booklet was printed as a four page supplement in the *New Idea* magazine of 9 December 1989. Run-on copies of this supplement were distributed by the Department.

Recreation for people with disabilities

The Program of Assistance for Recreation for People with Disabilities operated for two financial years from 1988–89 to 1989–90 as a continuation of the recreation component of the Program of Assistance for Sport and Recreation for Disabled People, after responsibility for sport for people with disabilities was transferred to the Australian Sports Commission.

The aim of the Program of Assistance for Recreation for People with Disabilities was to promote recreation opportunities for people with disabilities. In 1989–90, grants offered through this Program totalled $225,000.

From 1990–91, recreation projects for people with disabilities will continue to be funded but will be administered through the Recreation and Fitness Assistance Program.

Fitness projects

A National Strategy on Fitness

In November 1988 the Department hosted the National Physical Activity and Lifestyle Conference with the aim of providing a new focus for fitness and health promotion in Australia and to develop a national action plan to improve the fitness, health and well-being of the community.

Representatives involved in both the design and implementation of policies and programs from governments, academic, commercial and professional fitness interests, special interest and community groups, were invited to participate to ensure any initiatives arising from the conference could be introduced with support from both decision-makers and service deliverers.

Extensive consultations have been undertaken in 1989–90 to develop a National Fitness Strategy which outlines the roles and responsibilities of all the major players in the Australian fitness arena as well as the responsibilities for action identified at the Conference. It is expected that the Strategy will be presented to the Sport and Recreation Ministers Council for approval in August 1990.

Promotion of physical activity

In 1989–90 the Department continued to distribute publications aimed at increasing opportunities for Australians to participate safely in a range of physical activities. These included leaflets on back care and safe exercises for older adults; an any-year fitness diary; a booklet and video designed to assist professionals in the accurate assessment of fitness levels and the design of appropriate exercise programs; and a step-by-step guide to establishing a workplace fitness and health program.

Additional publications in 1989–90 included translations of the back care and safe exercises for older adults leaflets into eight community languages and a resource kit for women in remote and isolated communities designed to provide information and ideas to help them increase their fitness and general well-being.

The Department also provided funds towards the production costs of an ABC program on health and physical activity which is expected to go to air towards the end of 1990.

A video and booklet to assist community and volunteer groups at State and local levels to maximise their effective use of the media are to be produced. These resources are one outcome of a major consultancy project on how the Commonwealth could develop media strategies to promote physical activity among different target groups. Development of the national media strategy is continuing as part of the National Fitness Strategy.

Preliminary work was started on a major pilot survey of the physical fitness of adult Australians, which will provide information on fitness levels and the effect of demographic and lifestyle factors on personal well-being.

The Department also provided funds to pilot a Neighbourhood Network Project in Adelaide, which is designed to create an environment in which individuals, clubs, schools, councils, businesses etc, in a small local area are encouraged to arrange, promote and participate in regular physical activity in their neighbourhood.

The Department also provided support for two other research projects. The Australian Fitness Accreditation Council has undertaken an objective assessment of the quality, safety and effectiveness of commercially available exercise videos which has been distributed widely through many video outlets. The University of Sydney is undertaking a rigorous evaluation of the economic benefits of an employee health and fitness program, in the first project of its type in Australia.

Assistance for water safety organisations

In 1989–90 the Department provided financial assistance totalling $1.5 million to the Surf Life Saving Association of Australia, the Royal Life Saving Society–Australia, and Austswim. These grants aid and encourage the development of safe water-based activity programs for many Australians.

Australian Sports Commission—ASC

Following proclamation of the *Australian Sports Commission Act* 1989 on 1 May 1989, the Australian Sports Commission and the Australian Institute of Sport (AIS) have merged. The new ASC is now the sole authority to plan and coordinate Federal Government sports funding. The Act, however, makes provision for the Commission to conduct its elite athlete programs under the aegis of the AIS.

The ASC is a statutory authority providing leadership and long-term direction for Australian sports development. In 1989–90, the Commonwealth Government provided $43 million for the Sports Commission's programs and administration allocated across the following programs: elite athletes; sports development; sports participation; sports science, sports medicine and research facilities; the National Sport Information Centre; the Australian Sports Drug Agency; and corporate services.

Elite sports programs

The residential sports program involves 17 sports—basketball, canoeing, cricket, cycling, diving, gymnastics, hockey, netball, rowing, rugby union, soccer, squash, swimming, tennis, track and field, volleyball and water-polo. While many programs are at the AIS headquarters in Canberra, units have been established in Perth (hockey), Brisbane (squash, diving and rugby union), Adelaide (cycling and cricket), Gold Coast (canoeing), and Sydney (volleyball).

In June 1990 there were 446 scholarship holders under the residential sports program. Athletes at the AIS are encouraged to undertake employment or pursue secondary or tertiary education.

In addition to the residential sports program, the AIS also administers the National Sports Program which offers athletes the use of AIS facilities, resources and expertise. These are utilised for national selection trials, team training, talent development programs, coaches' seminars, and workshops for sports officials. Over 2,000 athletes from more than 50 sporting organisations take part in the program each year.

The Sports Talent Encouragement Plan (STEP) provides direct financial assistance to world-ranked Australian individuals and teams and to athletes demonstrating a capacity to achieve world rankings. The assistance contributes towards training and competition expenses of athletes and coaches. At June 1990, 126 individuals and 22 teams were receiving funding through the elite STEP program and 172 individuals through the potential and junior STEP programs.

Funding has been provided for the establishment of an Athlete Education and Employment Advisory Service which will assist elite athletes to gain employment and pursue educational opportunities. The service will be operated by the ASC.

Assistance to national sporting organisations

The ASC provides financial assistance to national sporting organisations through its Sports Development Program. Funding goes towards the employment of national executive directors and coaching directors, administrative support, development projects, and costs associated with international competition.

Applied Sports Research Program—ASRP

The Commission provides funds under the ASRP which enables national organisations to employ tertiary institutions to conduct research related to their sport.

Sport for all

The Commission has established the AUSSIE SPORTS and Youth Sports programs to improve the quality and variety of sports available to school-age children and young adults.

A Women's Sport Promotion Unit was established in 1987 to encourage women's participation and achievement in sport.

A Sport for the Disabled Program is also administered by the Commission with the objective of encouraging people with disabilities to participate in sport and to ensure they have the same opportunities as able-bodied people.

Drugs in sport

In response to recommendations contained in the report of the Senate Inquiry into Drugs in Sport, the Australian Sports Drug Agency was established in September 1989 with funding provided through the ASC. The Agency is responsible for educating the sporting and general community on the dangers of performance-enhancing drugs and conducting independent sampling and testing of sportspeople at all levels. The Agency will carry out 2,000 tests this year.

Analysis of samples will be conducted by the Australian Government Analytical Laboratories (AGAL) in Pymble which received International Olympic Committee accreditation in April 1990. AGAL was responsible for testing conducted during the 1990 Auckland Commonwealth Games.

Sport information

The ASC funds the National Sport Information Centre which maintains a comprehensive collection of sports literature and data for public usage.

Coaching support

Salary support is being provided for national coaches, their assistants and satellite program coaches, as well as national directors of coaching, to ensure top coaches are not lost to sport through the lack of a well-developed career structure. In addition, 15 coaching scholarships will be awarded this year and 10 overseas coaches are to be brought to Australia annually to share their expertise and methodology with local coaches. High performance coach awards are being developed to further upgrade coaching at the elite level and 10 high performance coaches will be trained each year under the new award.

Australian Coaching Council

The Australian Coaching Council is responsible for the development of sports coaches in all sports throughout Australia. The Council's activities include the education and accreditation of coaches through the National Coaching Accreditation Scheme (NCAS). At June 1990 over 70,000 coaches nationally had received accreditation under the NCAS.

SOCIO-CULTURAL ACTIVITIES

Aside from organised or institutional forms of culture, there is a dimension of social practice which is cultural: most simply described as those activities or forms of activity which people undertake in their own time, unconstrained by immediate material need, social obligation or gain. Typically, these are self-motivated activities which contribute to personal or social identity, and which give meaning and focus to values that people hold.

Language and religious practice, multicultural manifestation, attitudes to and use of Aboriginal lands, and participation in adult education are all examples of cultural activity embedded in community life that have begun to attract interest from policy makers. They can be seen, simply, as mechanisms for cultural maintenance, or as adaptations by individuals and by groups to social change. They both anchor institutional forms of culture (which rely on commercial or governmental support) within the society, and provide a bridge to mutual understanding across culturally diverse groups.

Aboriginal and Islander Community

Impact of European settlement

See article in *Year Book Australia* No. 73, pages 359–360.

People

At the 1986 Census, there were 227,645 Aboriginals and Torres Strait Islanders in Australia, or 1.5 per cent of the total population. Less than 25 per cent of them lived in cities of more than 100,000 people. One-third lived in rural areas, over twice the rural concentration of the population taken as a whole.

ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION: URBAN/RURAL DISTRIBUTION, JUNE 1986

Section of State	*Aboriginal and Torres Strait Islander Population*		*Total population*	
	No.	Per cent	No.	Per cent
Major urban (cities with more than 100,000 people)	55,537	24.4	9,817,933	62.9
Other urban (towns and cities with 1,000 to 99,999 people)	95,879	42.1	3,499,012	22.4
Rural	76,229	33.5	2,285,211	14.6
Total	**227,645**	**100.0**	**15,602,156**	**100.0**

Government policies

The basis of Government policy is to maintain and support the cultural identity of the Aboriginal and Torres Strait Islander people and to enhance their dignity and general well-being. The long term objective is to achieve a situation of justice and equality where Aboriginal and Torres Strait Islander people have sufficient economic and social independence to enjoy their rights as Australian citizens.

Consultation

In December 1987 the Government announced a major restructuring of its federal Aboriginal organisations.

Following extensive consultation with Aboriginal people the Government established the Aboriginal and Torres Strait Islander Commission (ATSIC) to take over the role and functions of the Department of Aboriginal Affairs and the Aboriginal Development Commission. Aboriginal Hostels Limited, and the Australian Institute of Aboriginal and Torres Strait Islander Studies will maintain their independence.

The new Commission formally combines consultative functions with the administrative functions formerly undertaken by the Aboriginal Development Commission and the Department of Aboriginal Affairs.

Through rationalisation of resources, including field offices, the Commission will result in a more streamlined, efficient and responsive administration of Aboriginal affairs than at any previous time.

Aboriginal Land

The view that secure land ownership is essential to providing Aboriginal people with freedom of choice in life style and a means for preserving their traditions, known as 'land rights', has been supported by all major parties at the federal level of Australian politics.

Aboriginal Land Rights (Northern Territory) Act

The *Aboriginal Land Rights (Northern Territory) Act 1976* came into operation on Australia Day 1977. This legislation gives recognition to Aboriginal land rights in the Northern Territory and is based on the recommendations of the second report of the Aboriginal Land Rights Commission.

Under the Act, Aboriginal people have been granted title to former Aboriginal reserves and a mechanism has been established for the hearing of claims to unalienated Crown Land. Claims are heard by an Aboriginal Land Commissioner who determines whether there are traditional Aboriginal owners to land concerned and makes recommendations to the Government on the grant of their land. Land is granted under inalienable freehold title which ensures security of tenure for future generations of traditional Aboriginal owners as the land cannot be sold or mortgaged. Title is held by Land Trusts composed of traditional Aboriginal owners and/or Aboriginal residents of the area.

A total of 461,486 square kilometres of land (about 34 per cent of the Northern Territory) has been granted to Aboriginal people in the Northern Territory at 30 June 1990 under the provisions of the Act. Of this area 257,992 square kilometres of former Aboriginal reserves and certain other lands were granted under Schedule 1 of the Act while a further 203,494 square kilometres were granted as a result of 23 successful land claims.

The Act also provides for the establishment of Aboriginal Land Councils to act as agents for traditional Aboriginal owners on land matters. Presently, there are three Land

Councils—the Tiwi Land Council (covering Melville and Bathurst Islands), the Northern Land Council (based in Darwin) and the Central Land Council (based in Alice Springs).

Provision is made under the Act for traditional Aboriginal owners to exercise substantial control over activities on their land, including mineral exploration and mining, and for them to benefit economically from the use of their land.

Where mining occurs on Aboriginal land, the Act provides that amounts equivalent to royalties received by the Northern Territory or the Commonwealth are paid from the Commonwealth's Consolidated Revenue Fund into the Aboriginals Benefit Trust Account (ABTA). Thirty per cent of these moneys is for the benefit of Aboriginal communities affected by mining and 40 per cent is paid to the Land Councils to fund their administrative expenses. The remaining 30 per cent (less amounts needed for ABTA administration and supplementary payments to Land Councils for their administration) is available for the benefit of Aboriginal people throughout the Northern Territory.

National parks on Aboriginal land in the Northern Territory

In the Northern Territory unique arrangements apply to certain national parks located on Aboriginal land. All of the land in the Uluru National Park and some of the land in the Kakadu National Park has been granted to the traditional Aboriginal owners, and then leased back to the Director, Australian National Parks and Wildlife Service (ANPWS) to be managed as national parks under the provisions of the *Aboriginal Land Rights (Northern Territory) Act 1976* and the *National Parks and Wildlife Conservation Act 1975.*

Boards of management with Aboriginal majorities have been established to manage these parks in conjunction with ANPWS.

Uluru (Ayers Rock-Mount Olga) National Park and Stages 1 and 2 of Kakadu National Park are inscribed on the World Heritage List.

On 10 September 1989 the Commonwealth presented title deeds to land in the Jawoyn (Katherine area) Land Claim, including part of the Nitmiluk (Katherine Gorge) National Park. These traditional owners signed an agreement leasing the land in the Park to the Northern Territory Government to manage it as part of the National Park. The management arrangements for Nitmiluk (Katherine Gorge) National Park provide for significant involvement of Aboriginal people. The Board of Management for the Park has a majority of Aboriginal members.

Similar management arrangements exist in relation to the land in the Gurig National Park which was granted to the traditional Aboriginal owners in 1981 by the Northern Territory Government under the *Cobourg Peninsula Aboriginal Land and Sanctuary Act 1981.*

Aboriginal land in the States

The list below shows the areas of land that have been transferred to Aboriginal ownership or otherwise provided to Aboriginal people under secure title through the policies and programs operated by the Commonwealth Government and State and Territory Governments.

Australian Capital Territory: In the Jervis Bay Territory the Commonwealth legislated to provide inalienable freehold title to 403 hectares of land at Wreck Bay for the Wreck Bay Aboriginal community. That legislation, the *Aboriginal Land Grant (Jervis Bay Territory) Act 1986*, came into effect on 16 January 1987. Title to that land was handed over in March 1987.

New South Wales: The Aboriginal Land Rights Act 1983 created a three-tiered structure of local, regional and State Aboriginal Land Councils which hold freehold title to land totalling approximately 190 square kilometres. Land Councils may make claims to Crown lands that are not occupied and not needed for essential purposes.

The Act also provided for the payment into a fund of 7.5 per cent of the State land tax revenue over the ensuing 15 years. Half of this fund is set aside as capital for future years, with the balance meeting the costs of Land Council administration and land purchases.

In May 1990, the Government introduced a Bill to amend the 1983 land rights legislation. The amendments seek to:

- establish an Aboriginal Affairs authority to hold title to Aboriginal land and to be responsible for all State Aboriginal policies and programs;
- strengthen financial accountability provisions; and
- encourage greater local community level Aboriginal participation in decision making.

Victoria: The Aboriginal Land Rights Act 1970 vested title to the Lake Tyers and Framlingham Reserves (the only remaining Aboriginal reserves in Victoria) in trusts comprised of the Aboriginal residents.

In 1987, following a request from the Victorian State Government, the Commonwealth Government enacted legislation to grant freehold title over the Framlingham Forest and a former reserve at Lake Condah—1,153 hectares in all—to the local Aboriginal communities.

Queensland: Legislation passed in 1984 improved Aboriginal control over reserve lands without granting full title. Transfer of title under Deeds of Grant in Trust (a form of perpetual lease) to major Aboriginal and Torres Strait Island reserves has now been completed. The issuing of deeds to a large number of minor reserves is still under consideration.

Western Australia: Under the *Aboriginal Affairs Planning Authority Act 1972*, Aboriginal reserve land was vested in an Aboriginal Land Trust. In March 1986, following the defeat of an Aboriginal land bill in the Upper House of Parliament, the State Government announced a new program intended to grant Aboriginal communities secure title to land and to provide for services by administrative arrangement without the need for legislation.

Some of the measures included under this program are:

- the granting of 99-year leases to Aboriginal Land Trust land;
- the transfer of other reserves under the control of the State Department of Community Services to Aboriginal control; and
- facilitation of the excision from pastoral leases of living areas for Aboriginal people.

South Australia: The Aboriginal Land Trust of South Australia, established by an Act of Parliament in 1966, holds freehold title to former reserves (approximately 5,000 square kilometres). The Trust leases this land to Aboriginal communities.

The *Pitjantjatjara Land Rights Act 1981* vested freehold title to over 100,000 square kilometres, or 10 per cent of the State, in the north-west to the Pitjantjatjara people. In 1984, similar legislation provided for Aboriginal ownership of 76,000 square kilometres of the Maralinga lands in the far west of the State.

Tasmania: In 1986, the Commonwealth Minister for Aboriginal Affairs commissioned a report on Aboriginal land needs in Tasmania. The Tasmanian Government in early 1990 issued a discussion paper on the possible transfer of 14 areas of land to Aboriginal control.

ABORIGINAL AND TORRES STRAIT ISLANDER LAND TENURE AND POPULATION: 30 JUNE 1989

	Aboriginal population June 1986(a)	*As % of total population*	*Total land area (sq km)*	*Aboriginal freehold (sq km)*	*As % of total land*	*Aboriginal leasehold(b) (sq km)*	*As % of total land*	*Reserve/ mission (sq km)*	*As % of total land*
NSW and ACT(c)	60,231	1.1	804,000	507	0.0	842	0.1	—	—
Vic.	12,611	0.3	227,600	32	0.0	—	—	—	—
Qld	61,268	2.4	1,727,200	5	0.0	53,855	2.0	95	0.0
SA	14,291	1.1	984,000	183,649	18.7	508	0.1	—	—
WA	37,789	2.7	2,525,000	35	0.0	103,227	4.1	202,223	8.0
Tas.	6,716	1.5	67,800	2	0.0	—	—	—	—
NT	34,739	22.4	1,346,200	443,542	34.4	23,369	1.7	45	0.0
Australia	**227,645**	**1.5**	**7,681,800**	**647,772**	**8.4**	**181,801**	**2.1**	**202,363**	**2.6**

(a) 1986 Census. *(b)* Includes pastoral, special purposes, and local shire leases. *(c)* Includes Jervis Bay Territory.

Homeland centres and outstations

Since the early 1970s many Aboriginal people have made the decision to adopt a more independent and traditional way of life.

They have moved to remote areas where they have established small outstation communities. In the past year, approximately 130 outstations have been funded by the Department of Aboriginal Affairs. The majority of these communities are situated in the Northern Territory, Western Australia, South Australia and Queensland. The population of each outstation generally varies between 30 to 50 people. Funding for outstations over the past three years has been in excess of $25 million.

Aboriginal Cultural Activity

While the past 200 years has seen the erosion of much of the traditional fabric of Aboriginal lifestyle, a large and rich body of artistic heritage has survived and in parts of Australia continues to develop in traditions unbroken for thousands of years. In many communities the arts remain an integral part of social and religious life but have also acquired the new emphasis of reinforcing Aboriginal identity and asserting traditional values in the face of an encroaching wider community. For many artists and craftspeople, the arts also provide an important and culturally relevant means of income.

The Aboriginal artists are perhaps still best known for a Northern Australian tradition of painting with natural ochres on prepared sheets of eucalyptus bark. However this is just one aspect of the rich and varied forms of expression in the visual arts and crafts which include ceremonial body decoration, ground painting and sculpture, wood carving and fibre crafts.

In recent years there has been increased adaptation and use of non-traditional media by Aboriginal artists in remote tribal communities as well as by a growing movement of urban and rural based artists. For example, paintings on board and canvas, print making and adapted batik techniques have become important media for expression in the visual arts for numbers of artists in Central Australian communities.

Similarly the traditional performing arts which include music, complex song cycles, dance and mime, vary considerably in form throughout Australia. However all the traditional arts present a unique spirituality which gives a distinctiveness to Aboriginal cultural expression.

Arts

A modern resurgence of Aboriginal arts continues rich traditions spanning tens of thousands of years, but incorporates many new forms.

Aboriginal artistic expression ranges across art, music, dance, oral and written literature, graphic design, video and film. Some artistic forms draw heavily on ancient traditions but present a vibrant and living heritage which remains relevant to Aboriginal Australians.

Aboriginal art varies greatly in style and form from one area of Australia to another but retains a spirituality which gives a distinctiveness and common strength to the work. Artists in the tropical north of Australia are well known for their painting with natural ochres on bark but artists from Papunya in Central Australia, for example, express the themes of traditional sand drawings with acrylic paint on canvas and board. In recent times large canvasses have been introduced which help the paintings to reflect the scale of traditional sand designs, and artists have developed their traditional themes with new materials and colours to provide immense contemporary impact. Considerable success is being enjoyed in exhibitions of these paintings in major art centres in Australia as well as in Europe and America.

Given the strong growth in market demand for Aboriginal visual arts and crafts in recent years, both in Australia and overseas, the Commonwealth Government commissioned a Review to inquire into and make recommendations upon ways in which the effectiveness and efficiency of the industry could be improved. The report on the Review is a most comprehensive document which analyses the current state of the industry and provides detailed recommendations for an Aboriginal arts and craft industry strategy. It was estimated that there are currently about 6,000 Aboriginal producers of arts and craft generating total retail sales of about $18.5 million.

Aboriginal musicians, whose music ranges from traditional song to rock and country music, are popular both in Australia and overseas. Aboriginal writers, poets and playwrights are also an emerging force in Australian literature.

The Aboriginal Arts Committee of the Australia Council supports a wide range of programs to assist Aboriginal and Islander initiatives. These include: the National Aboriginal and Islander Skills Development Association (a theatre and dance school); the Centre for Aboriginal Studies in Music; the Aboriginal National Theatre Trust; and the Aboriginal Cultural Foundation.

Broadcasting and telecommunications

The Government has endorsed a strategy for the development of Aboriginal broadcasting and telecommunications which aims to ensure that appropriate broadcasting and communications services are available to the Aboriginal people, particularly the substantial Aboriginal population living in remote Australia.

For further details of the Government's role in Aboriginal broadcasting and telecommunications *see Year Book Australia* No. 73, page 365.

Language Practices

See article in *Year Book Australia* No. 73 pages 365–366.

National Policy on Languages

Australia's National Policy on Languages was developed in response to a report of the Senate Standing Committee on Education and the Arts which recommended the development and coordination of language policies at the national level. A special consultant was appointed to coordinate their development. The Lo Bianco Report which resulted was endorsed by the Prime Minister on 26 April 1987 and tabled in the Senate on 4 May 1987.

The Government provided $15 million in 1987–88, rising to $28 million in 1988–89, $27.3 million in 1989–90 and $23 million in 1990–91, for the implementation of the Policy. These funds were used to introduce five new programs and supplement one existing program in key language areas, and for the establishment and operation of the Australian Advisory Council on Languages and Multicultural Education (AACLAME).

The new programs were the National Aboriginal Languages Program, the Australian Second Language Learning Program, the Adult Literacy Action Campaign, the Multicultural and Cross-cultural Supplementation Program, and the Asian Studies Program. The existing program which was supplemented was the New Arrivals element of the English as a Second Language Program.

National Aboriginal Language Program—NALP

The NALP recognises the unique and important place of Aboriginal and Torres Strait Islander languages in Australia's linguistic heritage.

Funding for the program was $0.5 million for 1987–88, rising to $1 million for both 1988–89 and 1989–90. The funds are intended to support a range of language maintenance and learning projects such as:

- language resource centres;
- bilingual programs;
- translating and interpreting services; and
- literacy programs.

Forty-one projects were approved for funding in 1989–90 by the Minister for Employment, Education and Training. Some of the factors taken into account when selecting the projects included the state of the language concerned; the degree of Aboriginal support and involvement; and the degree of funding available to an organisation or community from other sources.

Australian Second Language Learning Program—ASLLP

The National Policy on Languages promotes the study of at least one language in addition to English as an expected part of the educational experience of all Australian students. ASLLP, funded under the National Policy on Languages, is intended to provide greater opportunities for this to occur. An amount of $3.8 million was made available under the program in the 1987–88 budget. This funding, which increased to $7.7 million in 1988–89 and 1989–90, is applied on a calendar year basis.

Education authorities were free to allocate funds among languages according to locally determined priorities and needs. Authorities were asked, however, to take note of the Commonwealth Government's view that due emphasis should be placed on languages relevant to economic development, trade and tourism whilst recognising the need to improve provision for community languages.

ASLLP provided for activities such as curriculum and materials development; the professional development of teachers; the expansion of existing programs; the testing of innovative techniques in second language teaching and learning; support for schools offering a specialist curriculum on language studies; bilingual education programs; and the application of distance technology to language learning, particularly for students in country areas.

Adult Literacy Action Campaign

An interim evaluation of the two-year Adult Literacy Action Campaign was conducted on behalf of the National Consultative Council for International Literacy Year in 1990.

Multicultural and Cross-cultural Supplementation Program—MACSP

In 1989–90 MACSP provided funds on a submission basis to tertiary institutions and approved organisations to support the introduction and extension of cross-cultural and community language elements within existing professional and para-professional courses and develop curriculum materials for use in such courses.

The professional or para-professional areas targeted by the program include medicine and health, law, accounting and commerce, industrial relations and management, teaching, social welfare, librarianship and archives administration, and tourism.

MACSP funds also contributed to the research and development program of the National Languages Institute of Australia (NLIA). The NLIA, directed by Joseph Lo Bianco, was established in 1989 to offer national leadership and guidance on language education issues, and to offer practical support for language education across Australia.

Asian Studies

The Asian Studies Council (ASC) administers funds of $1.95 million which were allocated for 1987–88, 1988–89, 1989–90 and 1990–1991 under the National Policy on Languages to boost the study of Asian languages and cultures in Australia. An additional $1 million has been allocated in 1990, 1991 and 1992 under the new policy for Asian Studies Teacher Education.

The ASC has negotiated a collaborative approach between State, Territory and non-government education authorities to the development of curriculum and teacher training, with one or more States taking prime responsibility for agreed projects. Project designs include processes to keep all parties informed of developments so that the final products will be mutually acceptable.

As a result of recommendations made in a major inquiry commissioned by the ASC into the teaching of Asian languages and studies in higher education, the Government has established a number of initiatives to improve the quality and spread of Asian studies and languages courses.

In 1989 those taking Asian languages formed 4.21 per cent of all students presenting for a 'full-load' for Year 12 certification.

English as a Second Language in schools—ESL

The objective of the ESL Program is to assist schools and school systems to develop the English language competence of students of non-English speaking background.

The program has two elements:

- a *general support element* assists schools to provide additional English tuition to, and adapt existing teaching practices for, ESL students who have reached a level of English competence which permits participation in mainstream classes. Approximately $44 million was provided under this element in 1989; and
- a *new arrivals element* provides for up to 12 months of intensive English tuition for eligible students newly arrived in Australia. The per student grant in 1989 was $2,271.

Full details of activities funded under the general support element in 1989 are not yet available. Information in respect of 1988 shows that some 101,000 government school students and 76,000 non-government students were assisted.

In 1989, 14,715 new arrivals were catered for in intensive classes in government schools and special language centres and 2,362 in non-government schools and centres.

Over 2,300 specialist teachers were funded under both elements in government schools, and over 500 in non-government schools. Other major items of expenditure involved the salaries of ancillary staff (consultants, bilingual aides, counselling staff), curriculum and other materials and professional development.

Ethnic Schools Program—ESP

The major purpose of the ESP is to help students of non-English speaking background maintain their relevant languages and cultures. A secondary aim is to provide further opportunities for all children to gain access to the different community languages and cultures within Australian society.

The ESP assists some 500 ethnic community organisations to operate classes in the languages and cultural studies of their communities. These classes may be held either after formal school hours (after hours classes) or during formal school hours (insertion classes). 'Ethnic' in this context is used to denote languages and cultures other than those of English-speaking peoples. The ESP does not apply to language and cultural studies provided by formal schools.

The program has been operating since 1981, and since 1984, groups providing instruction in Aboriginal and Torres Strait Islander languages have been eligible to receive funding under it.

In 1989, 200,751 students were funded with 60,652 of these being taught in classes outside regular school hours, the remainder in insertion classes in regular schools.

The number of languages funded in 1989 was 50 with the most popular being Italian (67 per cent of enrolments), Greek (10 per cent), Chinese (5.3 per cent), Arabic (4.5 per cent), and Vietnamese (2.2 per cent). Details of major languages funded and student enrolments in recent years are shown in the following table.

ETHNIC SCHOOLS PROGRAM: ENROLMENTS BY TYPE OF CLASS

Type of class	*1987*	*1988*	*1989*
Number of students—			
After hours classes	71,056	64,998	60,652
Insertion classes	138,754	142,699	140,099
Total	**209,810**	**207,697**	**200,751**

ETHNIC SCHOOLS PROGRAM: FUNDING TO MAJOR LANGUAGES

Language	*1987*	*1988*	*1989*
		—per cent—	
Italian	64.8	66.3	67.3
Greek	11.6	11.0	10.3
Arabic	5.3	4.8	4.5
Chinese	5.1	5.0	5.3
Vietnamese	2.4	2.4	2.2
Spanish	1.4	1.2	0.9
Turkish	1.2	1.2	1.2
German	0.9	0.9	0.9
Croatian	0.8	0.8	0.9
Polish	0.7	0.8	0.8
Hebrew	0.7	0.7	0.7
Macedonian	0.7	0.7	0.6

International Literacy Year

The International Literacy Year program promotes literacy awareness in Australia and highlights the need for increased effort to meet the needs of adults who are experiencing literacy difficulties.

The first national survey of adult literacy (Wickert R., 1989) indicated that between 10 and 20 per cent (1.2 and 2.5 million) of Australian adults cannot perform everyday reading, writing and basic mathematics tasks. Of these people, 25 to 30 per cent are of non-English speaking background but the clear majority is of English speaking descent.

The Government has provided funding of $3 million for the program, $1.5 million in 1989–90 (which was allocated to projects of national significance to literacy development) and $1.5 million in 1990–91 which will be allocated to further research and expansion of literacy provision.

Adult Education

Adult education is the most decentralised of the education sectors. Courses offered generally do not lead to a qualification. It provides many people with educational opportunities otherwise unavailable, and while it is considered a valuable starting point in encouraging people to go on to award studies in TAFE and higher education, it also fulfils many cultural and recreational roles. The range of providers is enormous: from commercial and private industry, church and cultural groups to professional bodies; from the YMCA, higher education institutions, TAFE and Workers Educational Associations, to various State government departments; from public libraries, museums and galleries to Commonwealth government funded programs. However, due in part to adult learning needs arising from the restructuring of industrial awards, and particularly to the need to describe and assess competencies, participants in adult education courses increasingly require evidence of their learning and achievements.

The National Directory of Adult and Community Education Associations and Centres, updated by the Australian Association of Adult and Community Education (AAACE) in 1990, has almost 1000 entries.

Throughout the 1980s there has been a significant growth in non-government community based adult education run on a voluntary or semi-voluntary basis. These courses originate from the requirements, demands and initiatives of local communities and are offered by learning centres, community care centres, community schools, education centres (particularly in country areas), voluntary teaching networks, literacy groups, women's education programs, teachers' centres, ethnic networks, discussion centres and a variety of neighbourhood centres. Courses range from general interest, recreational and leisure activities, personal development, social awareness and craft through to vocational, remedial and basic education. Community based adult education constitutes a new trend in education. It is open to all, and non-formal characteristics demonstrate the capacity of the community to develop alternatives to institutionalised education. It is conservatively estimated that in 1988 there were 250,000 participants in these courses.

The higher education sector plays an integral part in adult education through programs of continuing education in professional development, preparatory skills, and general education. These courses are offered by institutions in response to industry and government initiatives and are at a level consistent with the general teaching of the institutions. In 1984, enrolments in these programs exceeded 160,000.

The TAFE sector is the largest provider of adult recreational and leisure courses. Enrolments in these courses for 1988 were 532,752. TAFE also offers the largest program of vocational and remedial courses.

There is at present no statistical system to identify the entire scope and extent of adult education. In particular the number of courses run by associations and the private sector is unknown. However, the 1986–87 National Social Science Survey now gives a better basis for estimating participation rates in adult education. The survey found that about six out of every ten Australians (63 per cent) over the age of 18 have taken at least one course. Men and women are about equally likely to take courses. Overall it is estimated that more than one million Australians participate in adult education each year. If training in industry is added, this figure is well over three million (*see* Butler p.7).

Cultural and Community Activities

Multiculturalism

Australia's non-discriminatory immigration policy has resulted in a diverse society in which people of different ethnic and racial origins live together sharing a commitment to the language, laws, institutions and interests of Australia.

The Government's policies on multiculturalism are founded on three principles:

- cultural identity: the right of all Australians, within carefully defined limits such as the rule of law and parliamentary democracy, to express and share their individual cultural heritage, including their language and religion;
- social justice: the right of all Australians to equality of treatment and opportunity, and the removal of barriers of race, ethnicity, culture, religion, language, gender or place of birth; and
- economic efficiency: the need to maintain, develop and utilise effectively the skills and talents of all Australians, regardless of background.

National Agenda for a Multicultural Australia

The Government's policies on multiculturalism are set out in the National Agenda for a Multicultural Australia, launched by the Prime Minister on 26 July 1989. The Agenda defines multiculturalism as follows:

> 'In a descriptive sense multiculturalism is simply a term which describes the cultural and ethnic diversity of contemporary Australia. We are, and will remain, a multicultural society.
>
> 'As a public policy multiculturalism encompasses government measures designed to respond to that diversity. It plays no part in migrant selection. It is a policy for managing the consequences of cultural diversity in the interests of the individual and society as a whole.'

The Agenda also includes a series of policy initiatives designed to meet both short term needs and long term objectives. The major initiatives contained in the Agenda are:

- new arrangements for assessing overseas skills and qualifications;
- a major community relations strategy, at a cost of $5.7 million over three years, jointly coordinated by the Office of Multicultural Affairs, the Human Rights and Equal Opportunity Commission, the Aboriginal and Torres Strait Islander Commission and the Department of Immigration, Local Government and Ethnic Affairs;
- strengthening of the Government's Access and Equity strategy, which is designed to improve access to government services, and to overcome barriers of language, culture and prejudice;
- legislation to establish the Special Broadcasting Service as an independent corporation, and extension of SBS television to Darwin and regional centres in Victoria, Queensland, South Australia and Tasmania;
- a package of English language measures including substantially increased resources for on-arrival courses and English in the Workplace;
- a firm Government commitment to continued support for second language learning, and a 10 per cent increase in funding for ethnic schools; and
- a review of administrative decision making and the law from a multicultural perspective.

Office of Multicultural Affairs

The Office of Multicultural Affairs was established in 1987 within the Department of the Prime Minister and Cabinet. The Office's responsibilities include promoting an understanding and appreciation of multiculturalism in the Australian community and advising on appropriate government responses to the needs of a multicultural society.

An Advisory Council on Multicultural Affairs was also established to provide advice to the Government and to act as a channel of communication between the Government and the community. The Council also assisted with the development of the National Agenda for a Multicultural Australia.

The Office has a major role in a number of National Agenda initiatives. In addition to participating in the development of the community relations strategy, the Office is responsible for coordinating and monitoring the Government's Access and Equity Strategy and, in conjunction with the Advisory Council, examining the feasibility of a Multicultural Act for Australia.

Since the launch of the Agenda the Office has also:

- commissioned research in areas relating to its program responsibilities;
- extended the Multicultural Australia Information System (MAIS), a biographical data base with over 10,000 entries available to researchers, policy matters and community groups; and
- developed a communications strategy to raise awareness and understanding of the cultural diversity of Australia and the benefits of multiculturalism.

Religious affiliation

See article in *Year Book Australia* No. 73, pages 372–373.

ENVIRONMENT AND CONSERVATION

The Australian Constitution does not include a reference to environment or conservation. Commonwealth powers in environmental protection, nature conservation and related fields arise from, or are incidental to, other specified powers. These specific Commonwealth powers include the power to legislate with respect to Territories of the Commonwealth, overseas and interstate trade and commerce, external affairs, corporations, taxation, defence, quarantine and granting financial assistance to States. Effectively the powers relating to environment and conservation are divided among the Commonwealth Government and the State and local governments. As a practical matter however, most decisions on environmental protection, nature conservation, land use and land management in the States are the responsibility of the State Governments.

The *Environment Protection (Impact of Proposals) Act 1974* was the first piece of Commonwealth legislation to specifically address environmental issues. The Act defined environment as comprising 'all aspects of the surroundings of human beings, whether affecting them as individuals or in social groupings', and set up procedures to review the environmental impact of development proposals which involved Commonwealth Government decisions.

Since then, through assessments made under the Act, the Government has involved itself on a number of occasions where environmental values were attracting broad community attention, notably the mining of Fraser Island in Queensland, the damming of the Franklin River in South-West Tasmania and the proposed Wesley Vale kraft pulp mill in Tasmania. Through these and other actions, the Commonwealth Government has been drawn into areas of environmental policy, planning and management not adequately covered by existing State administrative arrangements. The preparation of environmental guidelines for new bleached kraft pulp mills in Australia and action by the Government to establish a Commonwealth environmental protection agency are in recognition of this.

Commonwealth Responsibility for Environment and Conservation

In Commonwealth legislation, environment includes all aspects of human surroundings, whether affecting individuals or social groupings. Thus the environmental responsibilities of the Government relate to a broad range of activities bearing on the protection, conservation and enhancement of environmental quality and amenity. These responsibilities are shared among many agencies of government although a special focus is provided by the Ministry of the Arts, Sport, the Environment, Tourism and Territories.

The Commonwealth is responsible for the environment of the Territories other than the Northern Territory and the ACT, for the environmental impact of actions and decisions by its agencies operating in the States, and for contributing to international activities and standards for environmental management. The Commonwealth also plays a major role in the national coordination of environmental protection and conservation activities, and contributes substantively to environmental research, environmental education and information exchange.

World Heritage nominations

The Department of the Arts, Sport, the Environment, Tourism and Territories is responsible for the identification and nomination of potential World Heritage Areas in accordance with the World Heritage Convention. The *World Heritage Properties Conservation Act 1983* provides protection through the prohibition of activities which may damage or destroy world heritage property.

Australia has eight world heritage areas listed: Uluru National Park, Kakadu National Park, the Great Barrier Reef, the Willandra Lakes Region, the Lord Howe Island Group, the Australian East Coast Temperate and Sub-Tropical Rainforest Parks, the Wet Tropics of Queensland, and the Tasmanian Wilderness.

The World Heritage Committee agreed to accept a significant addition to the Western Tasmania Wilderness National Parks World Heritage property at their December meeting in 1989. The new Tasmanian Wilderness World Heritage Area, which includes the addition, covers 1,374,000 hectares.

In March 1990, the Prime Minister announced that Shark Bay in Western Australia and the subantarctic Heard and McDonald Islands will be nominated in 1990 for World Heritage listing. The Shark Bay nomination is being carried out with the cooperation of the Western Australian Government and will involve full consultation with local authorities and the community.

The Minister has discussed with the Tasmanian Minister for Parks, Wildlife and Heritage the possibility of nominating all the Australian subantarctic islands to the World Heritage List. An officer from the World Heritage section participated in a voyage to Macquarie Island in March 1990 to undertake some preliminary assessment of the world heritage values of the island.

Biological diversity

Biological diversity refers to the variety and variability among living organisms and the ecological complexes in which they occur. The term encompasses different ecosystems, species, genes and their relative abundance.

The Commonwealth Government is playing a major role in the development, through the United Nations Environment Program, of an international convention to conserve global bio-diversity. Some of the key issues to be resolved by participating countries include: international funding of global bio-diversity conservation; ownership and access to genetic resources; and scientific analysis to identify and target areas for conservation.

At the domestic level, the Government is in the early stages of developing a national strategy for the conservation of Australia's biological diversity.

Tasmanian World Heritage Area Ministerial Council

The Tasmanian World Heritage Area Ministerial Council was established in 1984 by agreement between the Commonwealth Government and the Tasmanian Government. The members of the Council are the Ministers responsible for environmental matters in both Governments, as well as the Tasmanian Premier and the Commonwealth Minister for Justice.

The Council provides a forum to advise both Governments on broad policy, management and financial matters relating to the World Heritage Area. Specific matters considered by the Council have included progress on the preparation of plans of management for the World Heritage Area; studies on the monitoring and rehabilitation of erosion on the banks of the lower Gordon River; development of walking tracks; and the provision of interpretation facilities and other public facilities.

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 coordinated activities and programs.

Australian and New Zealand Environment Council

The then Australian Environment Council was established in 1972 by agreement between the Prime Minister and the State Premiers. The members of the Council are the ministers responsible for environmental matters in the Commonwealth Government, State and Territory Governments and New Zealand. Papua New Guinea has observer status on the Council. In July 1989, New Zealand was formally given membership status where before it had been an observer.

The Council provides a forum for consultation, cooperation 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, coastal management, land use policy, biotechnology and climate changes induced by human activities.

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 the Commonwealth Government and State and Territory Governments as well as the Commonwealth Minister responsible for the Commonwealth Scientific and Industrial Research Organization (CSIRO). 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 was established by Cabinet in 1973 to report to the Government, through the Minister responsible for environmental matters, on the effects of the various actual and potential sources of ionising radiation exposure on the Australian population and environment. Consistent with its terms of reference, Council has identified a continuing need to review: underlying philosophies and assumptions in radiation protection; potential problems in the medical and industrial uses of ionising radiation; and potential sources of ionising exposure of the Australian population and environment. There is also a need to evaluate arrangements for the mining, milling and transport of uranium.

National Conservation Strategy for Australia—NCS

Following the international launch of the World Conservation Strategy in 1980, the Commonwealth Government, all States and the Northern Territory agreed to cooperate in developing a National Conservation Strategy for Australia which would aim to achieve 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 NCS in June 1984. The Northern Territory and most State Governments have also endorsed the Strategy. Victoria and Western Australia have prepared State Conservation Strategies. In various ways, all Governments have undertaken nature conservation activities consistent with the aims of the NCS.

Our Country Our Future

A statement on the Environment entitled *Our Country Our Future* was made by the Prime Minister on 20 July 1989. The Statement stressed the importance of achieving environmentally sustainable development.

As part of a package to support environmentally sustainable development the Government introduced many new programs, including:

- the development of a strategy comprising a coordinated research program on regional climate modelling and support for development of national and international responses to greenhouse issues;
- the One Billion Trees Program to encourage the growth of an additional billion trees by the end of the century;
- the Save the Bush Program which is aimed at ensuring the survival of remnant native vegetation;
- the Endangered Species Program which hopes to conserve the existing indigenous species in their natural habitat;
- the development of the Environmental Resources Information Network (ERIN) to draw together information on endangered species, vegetation types and heritage sites; and
- the development of a $320 million package for Landcare which consists of the Year/Decade of Landcare starting in 1990, a review of rural policies and taxation arrangements related to land care issues, and an expansion of the existing National Soil Conservation Program which is administered by the Department of Primary Industries and Energy.

In March 1990, the Statement was updated, and further comments were made, notably:

- the establishment of a Commonwealth Environment Protection Agency;
- development of a national waste minimisation and recycling strategy; and

- development of a scheme of 'green labelling' of products on the basis of their environmental friendliness.

Eight months after the Statement was delivered, the Prime Minister related progress made on the commitments contained in the Statement, such as success in moves to prevent mining in Antarctica, banning driftnet fishing and the import of non-antique ivory, and preparing guidelines for new kraft eucalypt pulp mills.

The Prime Minister also noted some new initiatives and additional expenditure by the Commonwealth Government on the environment, some of these being:

- research on the greenhouse effect, cane toads and mimosa pigra;
- acceleration of preparation of the National Wilderness Inventory;
- tax deductibility for donations to the Landcare Australia Foundation; and
- development of a national waste minimisation and recycling strategy.

Ecologically sustainable development

The need to develop and implement principles for ecologically sustainable development has been adopted as a major principle by the Commonwealth Government.

In order to help the Commonwealth Government develop sustainable development strategies, working groups are being established for major sectors of the economy—agriculture, forestry, fisheries, mining, manufacturing, energy production, energy use, transport and tourism.

In June 1990 the Commonwealth Government released a discussion paper on ecologically sustainable development to promote national discussion on the topic and to provide a guide for the working groups.

Resource Assessment Commission—RAC

The Resource Assessment Commission has been established by the Commonwealth Government to help resolve important questions about the future of Australia's natural resources. The RAC will investigate and report to the Prime Minister on the environmental, economic, financial, cultural and social implications of major resource use proposals, and provide the Government with informed advice about the options available in relation to those resources and their future utilisation.

The first RAC inquiries are into Australia's forest and timber resources and into the future use of the Kakadu Exploration Zone in the Northern Territory. Particularly sensitive environmental values are involved with these issues.

One billion trees

The One Billion Trees Program, which will result in the establishment of one billion more trees around Australia by the year 2000, was introduced as part of the Landcare initiatives. It promotes coordinated action by individuals, governments, and the community generally to conserve and regenerate tress in both rural and urban areas, and develop public awareness of the value of trees and associated vegetation. The success of this ten year program will depend upon gaining increasing participation by all sectors of the community.

The Program comprises a natural regeneration and direct seeding program which will establish over 600 million trees; and a community tree planting program which will grow over 400 million trees and also includes:

- a schools nursery project to provide hands-on learning experience;
- financial assistance for community groups and landholders to implement tree projects on farms, towns and cities; and

- major projects involving participation by community, corporate and government organisations.

The One Billion Trees Program is being administered for the Commonwealth by Greening Australia Limited, a non-profit organisation which draws together community, corporate and government bodies concerned to re-establish tree cover in Australia. Greening Australia Limited has many years experience in conducting tree planting and revegetation projects, and was involved in the implementation of the former National Tree Program.

National rainforest conservation

The Commonwealth Government, in 1986, provided $22.25 million for the conservation of rainforest through a National Rainforest Conservation Program (NRCP). The objectives of the NRCP are to ensure that the special values of Australia's rainforests are identified, promoted, protected and conserved for future generations, by supplementing activities undertaken by State and Territory Governments.

NRCP projects—which include research, surveys, rehabilitation, land acquisition, visitor centres and public information—have been carried out in New South Wales, Victoria, Western Australia, Tasmania, Northern Territory, Norfolk Island, Christmas Island, and Cocos Island. Negotiations are now taking place for Queensland to participate in the Program.

Australian Biological Resources Study—ABRS

The ABRS was established in 1973 to stimulate taxonomic and ecological studies of Australian flora and fauna through the 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 database exchange systems for museums and herbaria for biogeographic and taxonomic information. The ABRS became part of the Australian National Parks and Wildlife Service in 1990.

INFOTERRA

The Department of the Arts, Sport, the Environment, Tourism and Territories 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 within the region and to improve their environmental information capability and service.

Control of environmental contaminants

Various programs are concerned with the control of environmental contaminants. A national chemicals notification and assessment scheme came into effect on 18 July 1990. The *Environment Protection (Sea Dumping) Act 1981* controls dumping of wastes in marine waters. The *Hazardous Waste (Regulation of Exports and Imports) Act 1990* controls international trade in chemical and industrial wastes. National capacity for monitoring air pollution is being strengthened through a national monitoring, data acquisition and archiving program being implemented in conjunction with the States. Other activities cover codes of practice for activities involving radioactive materials, waste management, monitoring of the marine environment, environmental noise and air pollution control strategies.

Voluntary conservation organisations

The Commonwealth Government makes grants annually to voluntary conservation organisations to assist them to meet costs associated with their activities.

Statutory Authorities

Australian National Parks and Wildlife Service—ANPWS

The ANPWS was established under the *National Parks and Wildlife Conservation Act 1975*. The ANPWS is the principal nature conservation agency of the Commonwealth Government. It works in close cooperation with other Commonwealth authorities and with relevant State and Territory agencies.

The ANPWS is responsible for management of parks and reserves declared under the Act. Most significant of these are Kakadu National Park and Uluru (Ayers Rock–Mount Olga) National Park in the Northern Territory. National parks are also declared on Norfolk Island and Christmas Island and four national nature reserves have been declared in Australian waters. Ningaloo Marine Park is declared jointly under the National Parks and Wildlife Conservation Act and Western Australian legislation.

Wildlife conservation and management programs include the regulation and control of trade in wildlife and wildlife products through the administration of the *Wildlife Protection (Regulation of Exports and Imports) Act 1982*; administration of the *Whale Protection Act 1980*; administration of certain international agreements; and cooperative programs with the States with an emphasis on rare and endangered species. The Endangered Species Program and the Save the Bush Program are now managed by the ANPWS.

The ANPWS is also charged with the delivery of programs to enhance Aboriginal employment and development opportunities in nature conservation and land management related fields.

In addition the ANPWS carries out and supports research relevant to its charter and delivers public information and education programs on nature conservation issues.

The Australian National Botanic Gardens, the Australian Biological Resources Study and the Environmental Resources Information Network were integrated into the ANPWS in 1990.

Great Barrier Reef Marine Park Authority

This Authority was established by the *Great Barrier Reef Marine Park Act 1975*. The Authority's goal is to provide for the protection, wise use, understanding and enjoyment of the Great Barrier Reef in perpetuity through the development and care of the Great Barrier Reef Marine Park.

The Marine Park covers an area of 344,000 square kilometres representing 98.5 per cent of the region inscribed on the World Heritage List. The value of economic activity in the Marine Park has been estimated at $1,000 million per annum.

Management of the Marine Park is a cooperative venture with Queensland Government agencies. The main strategy used in management of the Park is 'zoning'. Zoning plans separate potentially conflicting activities while allowing all reasonable uses and ensuring the long-term conservation of the Reef's ecosystem.

The Authority ensures that it achieves competence and fairness in the care and development of the Marine Park by obtaining and interpreting information relevant to the understanding of the Great Barrier Reef. Most of this research is contracted to agencies such as universities although Authority staff may also undertake some research.

A major objective of the Authority is to enhance community understanding, appreciation, experience of and support for the Great Barrier Reef and the Marine Park.

The Authority also operates the Great Barrier Reef Aquarium which features a living coral reef system. The Aquarium aims to enhance community understanding of the Great Barrier reef and support for management of the Marine Park by providing a readily accessible coral reef and environment onshore.

Supervising Scientist for the Alligator Rivers 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 ensure the protection and restoration of the environment of the Alligator Rivers region from the effects of mining.

TRAVEL AND TOURISM

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: defined as comprising visitor arrivals and Australian resident departures where the intended stay 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

	Overseas visitors		*Australian residents*	
	Arrivals in Australia	*Departures from Australia*	*Departures from Australia*	*Arrivals in Australia*
Annual average—				
1971–75	475,900	479,000	647,600	631,400
1976–80	684,700	655,400	1,077,300	1,062,100
1981–85	998,600	966,600	1,337,600	1,306,000
Year—				
1984	1,015,100	985,800	1,418,600	1,374,700
1985	1,142,600	1,096,500	1,512,000	1,494,700
1986	1,429,400	1,363,800	1,539,600	1,513,200
1987	1,784,900	1,701,200	1,622,300	1,586,300
1988	2,249,300	2,174,100	1,697,600	1,637,900
1989	2,080,300	2,020,400	1,989,800	1,912,700

In addition to the basic classification of travellers shown above, certain other characteristics are ascertained. These are: sex, age, marital status, country of citizenship, country of birth, 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 or country 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 monthly, quarterly and annual publications. Certain unpublished information is available on request. Selected traveller statistics are shown in the following tables.

SHORT-TERM MOVEMENT— ARRIVALS AND DEPARTURES OF OVERSEAS VISITORS AND AUSTRALIAN RESIDENTS BY MONTH OF ARRIVAL OR DEPARTURE, AUSTRALIA, 1989
(persons)

	Overseas visitors		*Australian residents*	
Month	*Arriving*	*Departing*	*Departing*	*Returning*
January	168,900	221,700	131,700	222,200
February	191,100	170,900	112,700	129,100
March	180,000	187,300	170,900	132,100
April	160,100	172,700	153,000	141,100
May	136,600	162,000	146,700	121,200
June	142,700	127,000	197,800	139,700
July	175,400	150,600	173,800	197,900
August	161,400	178,400	165,400	159,000
September	149,900	149,700	201,700	187,300
October	174,100	154,800	147,000	218,000
November	192,700	177,000	144,200	151,400
December	247,400	168,300	244,900	113,700
Total	**2,080,300**	**2,020,400**	**1,989,800**	**1,912,700**
Sea travellers as a percentage of total	0.52	0.44	0.34	0.28

Short-term travel is subject to marked seasonal variation, December being the peak month for the arrival of overseas visitors and the departure of Australian residents.

SHORT-TERM MOVEMENT—DEPARTURES OF AUSTRALIAN RESIDENTS: STATED PURPOSE OF JOURNEY AND INTENDED LENGTH OF STAY, 1989
(persons)

	Main purpose of journey—						
Intended length of stay	*Visiting relatives*	*Holiday, accompanying business traveller(a)*	*Convention*	*Business*	*Employment*	*Other and not stated*	*Total*
Under 1 week	18,800	54,600	6,700	77,400	4,800	13,600	175,900
1 week and under 2 weeks	37,200	328,000	21,100	79,300	3,700	18,600	487,900
2 weeks and under 3 weeks	45,700	248,600	9,600	53,700	3,200	12,700	373,500
3 weeks and under 1 month	43,500	110,000	3,900	23,700	2,000	8,400	191,500
1 month and under 2 months	111,300	182,700	4,700	36,600	3,800	14,300	353,400
2 months and under 3 months	53,500	81,600	1,200	12,600	3,100	6,500	158,500
3 months and under 6 months	49,700	66,400	400	10,500	3,900	8,900	139,800
6 months and under 9 months	17,600	23,500	100	5,000	4,400	6,900	57,500
9 months and under 12 months	10,100	22,500	—	3,200	6,800	7,900	50,500
Not definite, not stated	200	600	—	200	—	300	1,300
Total	**387,600**	**1,118,500**	**47,700**	**302,200**	**35,700**	**98,100**	**1,989,800**

(a) Includes student vacation.

In 1989 the majority of Australian residents departing for short-term visits abroad intended to stay for under one month, with 52 per cent intending to stay for under 3 weeks. The majority of short-term visitor arrivals to Australia intended to stay under three weeks, with 48 per cent intending to stay under 2 weeks.

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: STATED PURPOSE OF JOURNEY AND INTENDED LENGTH OF STAY, 1989
(persons)

	Main purpose of journey—							
Intended length of stay	*In transit*	*Visiting relatives*	*Holiday accom-panying business traveller*	*Con-vention*	*Business*	*Employ-ment*	*Other and not stated*	*Total*
Under 1 week	78,400	31,400	268,900	6,400	93,500	1,900	19,200	499,800
1 week and under 2 weeks	100	54,000	341,000	11,200	68,700	1,700	17,400	494,000
2 weeks and under 3 weeks	—	71,100	170,100	4,800	30,600	800	9,200	286,600
3 weeks and under 1 month	—	60,400	87,100	1,300	7,400	500	5,300	161,900
1 month and under 2 months	—	117,100	120,100	1,200	14,200	2,000	11,000	265,600
2 months and under 3 months	—	44,500	39,400	300	5,200	2,000	7,500	98,900
3 months and under 6 months	—	42,200	43,900	100	5,700	5,000	13,800	110,700
6 months and under 9 months	100	32,700	38,600	100	3,000	6,200	24,200	104,900
9 months and under 12 months	—	6,500	17,200	—	2,600	9,800	21,700	57,800
Not definite, not stated	—	—	—	—	—	—	—	100
Total	**78,600**	**459,900**	**1,126,400**	**25,400**	**230,800**	**30,000**	**129,200**	**2,080,300**

SHORT-TERM MOVEMENT— ARRIVALS OF OVERSEAS VISITORS AND DEPARTURES OF AUSTRALIAN RESIDENTS BY COUNTRY OF RESIDENCE/INTENDED STAY AND INTENDED LENGTH OF STAY, AUSTRALIA, 1989

	Arrivals of overseas visitors— intended length of stay					*Departures of Australian residents— intended length of stay*			
Country of residence (visitors) and country of intended stay (residents)	*Under 1 week*	*1 week and under 1 month*	*1 month and under 3 months*	*3 months and under 12 months*	*Total(a)*	*Under 1 month*	*1 month and under 3 months*	*3 months and under 12 months*	*Total(a)*
Africa—									
South Africa	900	2,500	3,100	1,500	8,000	2,900	6,300	2,500	11,600
Other	1,500	3,100	3,000	1,600	9,300	5,300	8,300	3,000	16,600
Total, Africa	*2,500*	*5,500*	*6,100*	*3,200*	*17,300*	*8,200*	*14,600*	*5,500*	*28,300*
America—									
Canada	8,100	24,000	13,100	8,900	54,200	11,000	13,200	5,900	30,100
United States	59,200	149,600	35,000	17,000	260,700	147,000	69,300	25,200	241,700
Other	2,500	3,700	2,800	2,800	11,700	8,300	8,600	4,300	21,200
Total, America	*69,700*	*177,300*	*50,900*	*28,700*	*326,600*	*166,300*	*91,100*	*35,400*	*293,100*

For footnotes *see* end of table.

SHORT-TERM MOVEMENT— ARRIVALS OF OVERSEAS VISITORS AND DEPARTURES OF AUSTRALIAN RESIDENTS BY COUNTRY OF RESIDENCE/INTENDED STAY AND INTENDED LENGTH OF STAY, AUSTRALIA, 1989—*continued*

	Arrivals of overseas visitors— intended length of stay					*Departures of Australian residents— intended length of stay*			
Country of residence (visitors) and country of intended stay (residents)	*Under 1 week*	*1 week and under 1 month*	*1 month and under 3 months*	*3 months and under 12 months*	*Total(a)*	*Under 1 month*	*1 month and under 3 months*	*3 months and under 12 months*	*Total(a)*
Asia—									
Hong Kong	11,400	28,200	8,800	5,700	54,100	87,300	19,700	9,700	116,800
India	1,700	4,200	2,400	2,600	10,900	8,700	11,000	3,500	23,200
Indonesia	6,300	12,700	5,500	4,500	29,000	130,200	12,100	3,600	146,100
Japan	151,500	173,800	10,000	14,200	349,500	32,400	4,500	3,800	40,600
Malaysia	7,700	19.800	8,200	8,600	44,300	42,200	14,100	6,000	62,300
Philippines	2,400	3,600	2,100	2,800	11,000	27,700	11,100	3,000	41,900
Singapore	17,900	36,400	6,900	3,900	65,200	102,000	11,400	4,200	117,800
Thailand	5,400	6,700	2,100	3,100	17,400	72,700	11,200	2,600	86,600
Other	19,500	28,100	11,600	30,000	89,200	31,900	29,100	18,800	79,700
Total, Asia(b)	*223,900*	*313,400*	*57,600*	*75,500*	*670,500*	*534,900*	*124,200*	*55,100*	*714,900*
Europe—									
France	4,500	7,100	5,900	2,700	20,100	6,500	10,300	3,700	20,500
Germany*(c)*	8,800	20,100	28,800	10,400	68,100	10,100	14,100	6,500	30,800
Greece	900	900	2,700	2,800	7,400	4,000	12,000	15,600	31,700
Ireland*(d)*	800	2,600	4,200	4,600	12,200	1,600	6,000	2,500	10,100
Italy	2,700	7,200	6,600	4,000	20,500	7,600	20,900	13,200	41,600
Netherlands	2,000	5,400	8,800	3,900	20,100	3,200	6,700	3,400	13,300
Switzerland	3,000	6,600	10,900	6,900	27,400	2,900	4,500	1,500	9,000
United Kingdom	22,700	91,200	97,200	61,800	272,900	47,000	127,700	62,600	237,500
Yugoslavia	200	500	1,600	4,100	6,400	1,900	6,500	6,800	15,200
Other	8,600	22,700	21,800	22,500	75,600	9,700	23,800	16,800	50,400
Total, Europe	*54,100*	*164,300*	*188,500*	*123,700*	*530,700*	*94,600*	*232,400*	*132,700*	*460,000*
Oceania—									
Fiji	4,300	4,200	5,100	3,800	17,500	87,100	4,700	2,000	93,900
New Caledonia	3,500	7,600	1,600	800	13,400	13,600	600	300	14,600
New Zealand	122,200	252,400	44,300	30,500	449,300	255,300	32,500	9,500	297,300
Papua New Guinea	13,000	12,200	6,600	2,900	34,800	21,400	7,500	5,500	34,400
Other	6,200	5,000	3,400	3,800	18,400	46,700	3,700	1,800	52,200
Total, Oceania	*149,200*	*281,400*	*61,000*	*41,800*	*533,500*	*424,100*	*49,100*	*19,100*	*492,400*
Other	*300*	*600*	*400*	*500*	*1,700*	*700*	*400*	*100*	*1,300*
Total	**499,800**	**942,500**	**364,500**	**273,400**	**2,080,300**	**1,228,900**	**511,800**	**247,900**	**1,989,800**

(a) The difference between the sum of the components and the total comprises 'not definite, not stated, etc.' *(b)* 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. *(c)* Comprises the German Democratic Republic and the Federal Republic of Germany. *(d)* Includes Republic of Ireland and Ireland, undefined.

International Visitor Survey—IVS

Surveys of the travel pattern and attitudes of international visitors to Australia have been conducted on behalf of the Australian Tourist Commission for a number of years (annually between 1983 and 1986). No survey was conducted for 1987 but it was reintroduced for 1988, under the administration of the Bureau of Tourism Research.

Details contained in the survey include the arrival statistics, demographic profile, travel patterns, 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).

INTERNATIONAL VISITORS PERCENTAGE OF NIGHTS SPENT IN EACH STATE, 1988
(per cent)

	Country of Residence							
	US	*Japan*	*Other Asia*	*Canada*	*New Zealand*	*UK and Ireland*	*Other Europe*	*Total*
New South Wales	33	37	28	30	31	36	30	32
Victoria	17	15	42	18	14	18	19	21
Queensland	31	30	16	31	45	20	26	28
South Australia	5	5	4	6	3	9	9	6
Western Australia	5	7	7	7	5	11	7	8
Tasmania	2	4	2	4	1	2	2	2
Northern Territory	6	2	2	4	1	2	5	3
Australian Capital Territory	2	1	1	1	1	1	2	1
Australia	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Bureau of Tourism Research, International Visitor Survey, 1988.

Domestic Travel

Information about domestic travel patterns of residents within Australia in 1988–89 was collected in the Domestic Tourism Monitor, administered by the Bureau of Tourism Research. The survey results show that the main purposes of trips were holiday or pleasure (44 per cent), visiting friends and relatives (26 per cent), and conference, seminar, business (15 per cent). The main mode of transport used was private vehicle (74 per cent). The mean length of a trip by domestic tourists was 4.7 nights in 1988–89.

The following tables contain data obtained from the survey.

SUMMARY OF PERSON TRIPS AND NIGHTS AWAY, 1988–89

State of origin	*Estimated population year ending June 1989(a)*	*Person trips*	*Person trips per person*	*Nights away by person*	*Nights away per person*	*Nights away per person trip*
	'000	'000		'000		
New South Wales	4,508.3	14,899	3.3	69,949	15.5	4.7
Victoria	3,393.1	10,889	3.2	50,518	14.9	4.6
Queensland	2,190.2	9,323	4.3	43,124	19.7	4.6
South Australia	1,128.7	4,146	3.7	17,890	15.9	4.3
Western Australia	1,226.2	4,209	3.4	20,552	16.8	4.9
Tasmania	346.6	1,193	3.4	5,237	15.1	4.4
Northern Territory	112.2	171	1.5	1,713	15.3	10.0
Australian Capital Territory	213.1	1,189	5.6	5,043	24.7	4.2
Total	**13,118.5**	**46,017**	**3.5**	**214,027**	**16.3**	**4.7**

(a) For persons aged 15 years and over.
Source: Bureau of Tourism Research, Domestic Tourism Monitor 1988–89.

NUMBER OF NIGHTS SPENT IN STATE OF MAIN DESTINATION BY MAIN PURPOSE OF TRIP, 1988–89
('000 nights)

	Main purpose of trip				
State of main destination	*All business*	*Pleasure/ Holiday*	*Visiting friends/ relatives*	*Other*	*Total*
New South Wales	6,783	33,475	17,120	9,769	67,147
Victoria	3,407	18,986	8,453	5,124	35,970
Queensland	6,641	34,509	12,686	7,886	61,722
South Australia	1,863	7,636	3,416	2,586	15,501
Western Australia	3,890	9,944	4,153	2,851	20,838
Tasmania	784	3,044	1,187	633	5,648
Northern Territory	883	1,691	271	372	3,217
Australian Capital Territory	550	1,736	994	702	3,983
Total	**24,800**	**111,023**	**48,281**	**29,923**	**214,027**

Source: Bureau of Tourism Research, Domestic Tourism Monitor 1988–89.

Tourism

Characteristics

Tourism encompasses all short-term travel away from the normal place of work and residence, including that undertaken for business and pleasure. It includes both domestic and international travel and involves the consumption of a wide range of goods and services provided by, for example, transport and tour operators, accommodation establishments, theme parks and attractions, entertainment and arts venues, museums and historical sites, restaurants, travel agents and souvenir retailers.

It also draws on services provided by the Commonwealth Government, the State and Territory Governments and local governments without direct charge to tourists, such as the construction and maintenance of roads, airports, harbours, railways and national parks, tourism promotion, immigration and customs services, information services and the provision of a large number of recreational facilities.

In broad terms, tourism also includes economic activities which supply inputs to the industries which directly cater for tourists and which produce consumer durables, such as motor vehicles and recreational equipment used for tourism activity.

The Australian Context

Just as tourism is a dominant force in the global economy, it is one of Australia's largest and most dynamic industries too.

In recent years, the industry has experienced unprecedented growth and made a substantial contribution to national economic development. It has matured into a prominent, sophisticated industry with the potential to play a significant role in securing Australia's future prosperity.

Economic Importance

It is estimated that tourism contributed 5.4 per cent to Gross Domestic Product in 1988–89 and accounted for some 448,000 jobs (nearly 6 per cent of the workforce). During the 1980s, the industry created over 100,000 new jobs.

In 1988–89 total expenditure derived from tourism was around $22.5 billion, of which $16.3 billion was attributed to domestic tourism. Foreign exchange earnings from international tourism to Australia were $6.2 billion, exceeding export earnings from many of Australia's traditional export commodities. After taking into account the cost of imports in providing for overseas visitors, it is estimated that the net benefit to Australia's balance of payments of a 20 per cent increase in international tourist expenditure is around $235 million. This underlines the outstanding potential which tourism offers for redressing Australia's balance of payments deficit.

Investment in the industry has flourished and tourism has been a major inducement to the inflow of foreign capital. Over the three years to March 1990, the value of major tourist projects under construction or firmly committed has more than doubled to around $21 billion. This indicates investor confidence in the long term viability of the industry.

Whereas growth in the domestic market over the past few years has been relatively stable at about 3 per cent, growth in inbound tourism has been particularly strong. In 1988, overseas visitor arrivals increased by 25 per cent for the third year in succession to reach a record 2.25 million. While numbers declined slightly to 2.1 million in 1989, this was to be expected given the rain shadow effect of a successful Bicentenary and World Expo in 1988 and the adverse impact of the disruption to domestic airline services in late 1989. A return to strong growth has been evident in the first half of 1990.

While growth in tourism flows to Australia over the last five years has averaged over three times the international growth rate, Australia's share of world tourism is still small, accounting for only 0.58 per cent of total international arrivals. This suggests that for Australia, tourism is an industry with considerable potential for future growth.

Issues of Topical Interest

Foreign Investment

In order to keep pace with the growth in tourism substantial investment in a range of tourism facilities is required. Continuing industry access to foreign investment seems likely to be the only way for it to develop the infrastructure necessary to achieve year 2000 goals and optimise Australia's earnings from tourism.

Foreign, and in particular Japanese, investment in Australian tourism facilities is increasing. Much of this investment is concentrated in Queensland and has attracted some criticism from community groups.

International Aviation

An efficient international aviation sector is critical to the development of tourism to Australia, with 99 per cent of international arrivals and departures being by air. Tourism requires sufficient airline capacity to meet demand and provide competitive fares. Accordingly, the Government last year announced a new international aviation policy under which a wider range of views, including those of tourism, were to be fully taken into account in determining aviation strategies.

Domestic Aviation

Domestic aviation is of major importance to the Australian tourism industry with 40 per cent of international visitors to Australia using air transport during their stay and about 10 per cent of trips by domestic tourists also being by air.

Termination of the so-called 'two airlines agreement' from 1 November 1990 should lead to domestic aviation playing even a greater role in tourism development. With the changed arrangements from 1 November new airlines will be able to operate on trunk routes.

Tourism and the Environment

The tourism industry's fundamental attraction and marketing 'edge' is the natural environment. Protection and conservation of the environment are important to the industry's long term growth prospects.

The Government is developing an ecologically sustainable development strategy for major industry sectors in Australia. Tourism has been accorded recognition as a major industry sector as one of the nine industry working groups.

Vocational Training

The Commonwealth Government has given priority to industry training in recent years. Reports on training needs and strategies have been commissioned and actioned. Some research has been undertaken on the labour characteristics of the hospitality sector and graduates' experiences in the industry. Further research on the industry's capacity to attract and retain staff is planned. Funds are provided for training facilities and training programs developed by a body representative of industry, government and unions. Industry is encouraged to commit funds equivalent to a minimum percentage of payroll to training.

Australian Tourist Commission

The Australian Tourist Commission (ATC) was established in 1967. Following a wide ranging review, the ATC was restructured in 1987 and a new Act, the *Australian Tourist Commission Act 1987*, was passed by Parliament. The ATC is a statutory authority. Its role is to increase the number of visitors to Australia, to maximise for Australia the benefits from overseas visitors and to ensure that Australia is protected from adverse environmental and social impacts of international tourism. The ATC has a staff of 114 world wide. Its head office is situated in Sydney and it has 11 offices in major overseas cities. The ATC's Budget allocation was $37.7 million in 1989–90. A further allocation, which brought the total allocation to a record $56.2 million, was provided to fund an international Recovery Plan to combat the adverse effects to international tourism of the disruption to domestic airline services.

The Commission engages in a wide variety of marketing activities including consumer and trade advertising, utilising both print and television media, market research and industry seminars and familiarisation visits for travel agents, journalists and photographers. These activities are carried out in cooperation with State and Territory tourism authorities as well as the Australian and overseas travel industries. Advertising designed to promote Australia as a friendly, exciting and safe tourist destination provides a marketing umbrella for the States, Territories and industry, and is placed in various tourist source markets at times selected to achieve maximum awareness of Australia as a travel destination. Overseas offices of the ATC are located in London, Frankfurt, Los Angeles, New York, Chicago, Toronto, Singapore, Tokyo, Osaka, Hong Kong and Auckland.

Tourism Shopping

In November 1987, the Government established the Bradbury Committee Inquiry into 'Tourism Shopping in Australia' because of concern that Australia was failing to maximise tourism shopping revenue. It reported to the Minister in September 1988 and presented a range of recommendations to improve the availability and quality of goods and services. The Inquiry's single most important conclusion was that Australia lacked the image of a tourism shopping destination and needs to develop one as an attraction to overseas tourists.

In line with the reports recommendations a 'Tourism Shopping Implementation Committee' (TSIC) was formed in March 1989 under the chairmanship of Mr Anthony Coote AM. The Committee was required to advise on the progress and feasibility of implementing the Bradbury Inquiry recommendations as well as to identify any additional issues requiring attention.

The Department provided the secretariat for the Committee, which presented its Report to the Minister early in 1990.

Surveys of tourist accommodation establishments

Quarterly accommodation surveys were commenced in the September quarter 1975 and data published from these surveys include room 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)

		December quarter 1988	*March quarter 1989*	*June quarter 1989*	*September quarter 1989*	*December quarter 1989*
LICENSED HOTELS WITH FACILITIES*(b)*						
Establishments	Number	1,169	1,159	1,164	1,153	1,160
Guest rooms	"	48,037	48,177	50,583	50,184	52,135
Bed spaces	"	125,282	125,502	131,836	131,787	135,657
Room occupancy rates	%	56.4	53.2	49.6	50.9	50.3
Bed occupancy rates	%	34.7	33.6	29.1	31.3	30.7
Gross takings from accommodation	$'000	252,222	230,718	226,198	246,593	243,881
MOTELS, ETC.*(b)*						
Establishments	Number	3,408	3,400	3,438	3,438	3,469
Guest rooms	"	91,282	91,138	92,079	92,424	93,779
Bed spaces	"	278,039	277,160	280,648	282,175	286,032
Room occupancy rates	%	56.3	56.5	52.3	55.9	54.4
Bed occupancy rates	%	34.3	35.9	30.6	33.8	32.6
Gross takings from accommodation	$'000	277,084	275,516	260,519	293,038	288,560
TOTAL HOTELS AND MOTELS ETC.*(b)*						
Establishments	Number	4,577	4,559	4,602	4,591	4,629
Guest rooms	"	139,319	139,315	142,662	142,608	145,914
Bed spaces	"	403,321	402,662	412,484	413,962	421,689
Room occupancy rates	%	56.3	55.4	51.4	54.2	52.9
Bed occupancy rates	%	34.4	35.2	30.1	33.0	32.0
Gross takings from accommodation	$'000	529,306	506,234	486,717	539,631	532,440
CARAVAN PARKS*(c)*						
Establishments	Number	2,660	2,659	2,656	2,637	2,634
Powered sites	"	200,933	201,736	201,611	200,947	200,639
Unpowered sites	"	71,106	71,010	70,616	71,691	70,485
Cabins, flats etc.	"	8,539	8,839	9,049	9,474	9,534
Total capacity	"	280,578	281,585	281,276	282,112	280,658
Site occupancy rates	%	33.8	40.1	32.9	34.3	35.5
Gross takings from accommodation	$'000	77,220	91,441	69,578	78,723	85,100
HOLIDAY FLATS, UNITS AND HOUSES*(b)*						
Letting entities	Number	1,351	1,328	1,333	1,358	1,333
Flats, units etc.						
One bedroom	"	7,180	7,236	7,184	7,560	7,267
Multiple bedroom	"	24,358	24,015	23,828	24,416	24,358
Total flats units etc.	"	*31,538*	*31,251*	*31,012*	*31,976*	*32,118*
Bed spaces	"	133,799	131,816	131,215	135,190	135,575
Unit occupancy rates	%	55.7	59.9	44.0	48.4	50.1
Gross takings from accommodation	$'000	76,616	85,811	56,480	78,044	76,777

(a) For the purpose 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). *(c)* Includes long-term caravan parks. For definitions *see Tourist Accommodation, Australia* (8635.0).

Domestic tourism monitor

The 1988–89 Domestic Tourism Monitor, which covers travel by Australians, indicated that the most frequently used accommodation was the home of friends or relatives (43 per cent of visitor nights), followed by hotels or motels (16 per cent) and caravan parks or camping grounds (16 per cent). The following table classifies the types of accommodation used for all visitor nights by the main purpose of the trip.

NUMBER OF VISITOR NIGHTS IN ALL ACCOMMODATION, BY MAIN PURPOSE OF TRIP, 1988–89
('000 visitor nights)

All accommodation used	Main purpose of trip: All business	Pleasure/ holiday	Visiting friends/ relatives	Other	Total
Hotel/motel with facilities	10,439	17,811	2,319	3,459	34,028
Hotel/motel without facilities	840	1,981	186	551	3,558
Friends'/relatives' house	3,898	34,669	41,587	10,972	91,126
Caravan/tent/cabin/camping	1,964	27,470	1,123	3,430	33,986
Rented house/flat	1,513	11,777	584	1,904	15,778
Own holiday home/flat	313	7,897	449	1,078	9,737
Guest house/private hotel	373	1,938	291	426	3,028
Farm	621	870	921	695	3,107
Boat/cabin cruiser	286	807	—	70	1,163
Hostel	761	551	36	1,016	2,360
Other/not stated	3,792	5,252	785	6,322	16,151
Total	**24,800**	**111,023**	**48,281**	**29,922**	**214,027**

Source: Bureau of Tourism Research, Domestic Tourism Monitor, 1988–89.

Tourist attractions

As part of the 1986–87 Service Industries surveys, data were collected from selected tourist attractions in each State and Territory. The following table gives a brief summary. Further details of type of attraction (e.g. museums and art galleries, amusement and theme parks, zoos, wineries, mines and factories, natural attractions, historic attractions) are given in *Tourist Attractions* (8661.0).

TOURIST ATTRACTIONS: SUMMARY OF OPERATIONS, 1986–87

State	Number of attractions: Admission charged	Number of attractions: Admission not charged	Number of visitors(a)	Persons employed	Income from admission charged	Expenses	Net capital expenditure
	no.	no.	'000	no.	$'000	$'000	$'000
New South Wales	233	224	20,372	5,541	47,401	192,805	37,510
Victoria	214	131	15,893	3,265	29,854	106,287	22,429
Queensland	220	91	15,930	3,194	80,779	128,960	29,935
South Australia	135	220	9,618	1,342	6,974	44,595	3,352
Western Australia	144	118	(b)4,371	1,259	13,265	42,441	11,061
Tasmania	78	33	2,191	507	6,279	14,441	1,738
Northern Territory	16	15	1,471	330	5,143	14,070	6,914
Australian Capital Territory	12	15	3,961	724	1,694	26,054	4,920

(a) Excludes visitors to national parks. Persons visiting more than one attraction counted for each. *(b)* Excludes visitors to natural attractions.

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13

AGRICULTURAL INDUSTRIES

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 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

The major source of the statistics in this chapter is the Agricultural Census conducted at 31 March each year. A wide range of information is collected 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. Since 1986–1987, the Census includes establishments with agricultural activity which have an estimated value of agricultural operations of $20,000 or more. Prior to this (1982–83 to 1985–86) the cut-off value was $2,500.

While these alterations 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

Agricultural units in scope of the Agricultural Census are stored on the ABS's central business register (IRIS). Details of the structure of economic units engaged in agriculture, in hierarchical order, are:

- **Management Unit:** This is the largest unit within an enterprise group which controls its productive activities and for which accounts are kept. From these accounts detailed annual and sub-annual (i.e. at least quarterly) revenue, expenses, stocks, capital expenditure and employment data must be available to the ABS. This will enable measures of industry performance, such as gross product (i.e. adjusted value added), to be calculated. It consists of one or more establishments.
- **Establishment:** This is the smallest accounting unit within a State or Territory of Australia which controls its productive activities and for which a specified range of detailed data is available, at least on an annual basis.

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, conducted for 1988–89, *see Agricultural Industries Financial Statistics, Australia, 1988–89, Preliminary* (7508.0).

Structural Statistics

The following tables provide information relating to the structure of operating units during 1988–89. The following terminology is used in the tables:

- **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).

ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY, INDUSTRY AND ESTIMATED VALUE OF AGRICULTURAL OPERATIONS AUSTRALIA, 31 MARCH 1989

ASIC Code	Industry of establishment — Description	Estimated value of agricultural operations ($'000) — Less than 20	20–29	30–39	40–49	50–59	60–74	75–99	100–149	150–199	200–499	500 or more	Total establishments
0124	Poultry for meat	19	18	17	15	28	51	94	154	94	144	71	705
0125	Poultry for eggs	22	13	15	20	14	26	31	93	69	209	179	691
0134	Grapes	77	201	302	369	368	524	530	574	175	161	48	3,329
0135	Plantation fruit	102	165	187	172	145	166	184	200	115	138	49	1,623
0136	Orchard and other fruit	456	450	445	415	368	497	557	718	426	657	201	5,190
0143	Potatoes	15	28	39	55	56	96	134	215	147	404	105	1,294
0144	Vegetables (except potatoes)	192	289	254	231	183	264	314	416	292	634	310	3,379
0181	Cereal grains (incl. oilseeds n.e.c.)	265	349	405	392	354	527	788	1,211	713	1,570	497	7,071
0182	Sheep—cereal grains	95	350	586	767	840	1,427	2,568	4,373	3,029	5,749	1,125	20,909
0183	Meat cattle—cereal grains	95	170	225	221	194	224	357	461	276	481	106	2,810
0184	Sheep—meat cattle	170	389	631	621	609	771	1,080	1,441	812	1,330	330	8,184
0185	Sheep	674	1,047	1,672	1,748	1,605	2,160	3,265	4,610	2,830	4,774	821	25,206
0186	Meat cattle	1,865	2,616	2,530	1,810	1,372	1,443	1,447	1,498	852	1,283	395	17,111
0187	Milk cattle	172	335	570	705	1,042	1,925	3,423	4,072	1,535	1,079	54	14,912
0188	Pigs	58	78	104	98	100	149	193	315	216	387	146	1,844
0191	Sugar cane	53	99	163	252	369	663	1,018	1,283	635	746	59	5,340
0192	Peanuts	6	6	15	19	17	17	35	44	12	21	5	197
0193	Tobacco	—	4	8	14	13	34	81	189	75	69	4	491
0194	Cotton	—	1	4	—	5	6	8	18	29	121	277	469
0195	Nurseries	143	97	185	74	116	222	165	306	166	265	139	1,878
0196	Agriculture n.e.c.	434	548	480	299	244	246	237	230	121	185	51	3,075
	Total (ASIC code 01)	*4,913*	*7,253*	*8,837*	*8,297*	*8,042*	*11,438*	*16,509*	*22,421*	*12,619*	*20,407*	*4,972*	*125,708*
02	Services to agriculture	10	13	11	12	10	10	9	7	4	5	—	91
03	Forestry and logging	4	3	3	2	2	1	2	3	1	—	1	22
04	Fishing and hunting	1	1	—	2	—	3	—	1	1	—	9	
	Total (ASIC Division A)	*4,928*	*7,270*	*8,851*	*8,313*	*8,054*	*11,452*	*16,520*	*22,432*	*12,625*	*20,412*	*4,973*	*125,830*
B	Mining	—	3	—	—	2	—	1	3	1	1	—	11
C	Manufacturing	12	12	13	12	15	9	10	20	7	13	17	140
D	Electricity, gas and water	—	—	—	—	—	—	1	—	—	1	—	2
E	Construction	18	16	16	12	7	5	8	8	6	4	1	101
F	Wholesale and retail trade	25	11	16	14	10	6	8	11	3	12	4	120
G	Transport and storage	26	23	22	13	15	15	11	12	4	5	1	147
H	Communication	—	—	—	—	—	—	—	—	—	—	—	—
I	Finance, property and business services	7	2	5	5	—	3	3	1	—	2	—	28
J	Public administration and defence	—	1	—	1	—	—	1	—	—	—	—	3
K	Community services	5	8	9	5	8	6	19	18	16	36	9	139
L	Recreation, personal and other services	7	4	2	3	—	4	3	3	3	1	—	30
	Total, all industries	**5,028**	**7,350**	**8,934**	**8,378**	**8,111**	**11,500**	**16,585**	**22,508**	**12,665**	**20,487**	**5,005**	**126,551**

ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY, BY INDUSTRY OF ESTABLISHMENT, 31 March 1989

Industry of establishment										
ASIC Code	*Description*	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
0124	Poultry for meat	374	123	89	57	50	12	—	—	705
0125	Poultry for eggs	225	150	146	55	93	18	3	1	691
0134	Grapes	600	1,507	42	1,050	121	7	2	—	3,329
0135	Plantation fruit	679	—	816	—	121	—	7	—	1,623
0136	Orchard and other fruit	1,559	968	910	1,138	399	205	9	2	5,190
0143	Potatoes	141	463	225	103	147	215	—	—	1,294
0144	Vegetables (except potatoes)	618	558	1,086	456	423	215	22	1	3,379
0181	Cereal grains (incl. oilseeds n.e.c)	1,615	1,555	2,139	1,034	703	13	12	—	7,071
0182	Sheep—cereal grains	7,099	3,482	356	5,087	4,852	33	—	—	20,909
0183	Meat cattle—cereal grains	972	119	1,628	74	12	2	3	—	2,810
0184	Sheep—meat cattle	3,565	2,329	617	735	554	370	—	14	8,184
0185	Sheep	9,340	7,243	1,534	2,492	3,637	926	—	34	25,206
0186	Meat cattle	4,970	3,626	6,478	356	983	505	178	15	17,111
0187	Milk cattle	2,383	8,148	2,080	984	525	788	2	2	14,912
0188	Pigs	570	252	554	270	139	58	1	—	1,844
0191	Sugar cane	474	—	4,866	—	—	—	—	—	5,340
0192	Peanuts	1	—	194	—	2	—	—	—	197
0193	Tobacco	17	173	301	—	—	—	—	—	491
0194	Cotton	291	—	178	—	—	—	—	—	469
0195	Nurseries	677	320	405	192	211	56	15	2	1,878
0196	Agriculture n.e.c	1,129	627	679	303	230	95	11	1	3,075
	Total (ASIC code 01)	*37,299*	*31,643*	*25,323*	*14,386*	*13,202*	*3,518*	*265*	*72*	*125,708*
02	Services to agriculture	3	23	25	12	26	2	—	—	91
03	Forestry and logging	3	1	8	—	2	8	—	—	22
04	Fishing and hunting	—	—	—	1	3	5	—	—	9
	Total (ASIC Division A)	*37,305*	*31,667*	*25,356*	*14,399*	*13,233*	*3,533*	*265*	*72*	*125,830*
B	Mining	4	2	1	2	2	—	—	—	11
C	Manufacturing	18	28	9	36	41	7	—	1	140
D	Electricity, gas and water	—	2	—	—	—	—	—	—	2
E	Construction	11	40	17	15	11	7	—	—	101
F	Wholesale and retail trade	19	39	17	14	12	18	1	—	120
G	Transport and storage	34	34	22	20	21	16	—	—	147
H	Communication	—	—	—	—	—	—	—	—	—
I	Finance, property and business services	4	5	8	5	4	1	1	—	28
J	Public administration and defence	2	—	—	1	—	—	—	—	3
K	Community services	28	12	51	11	28	9	—	—	139
L	Recreation, personal and other services	6	12	2	2	7	1	—	—	30
	Total, all industries	**37,431**	**31,841**	**25,483**	**14,505**	**13,359**	**3,592**	**267**	**73**	**126,551**

Gross Value of Agricultural Commodities Produced and Index of Values at Constant Prices

Definitions

Gross value of commodities produced: the value placed on recorded production at the wholesale prices realised in the market place.

Index of values at constant prices*:* 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.

Publications

Two preliminary estimates of value of commodities produced are published: *Value of Principal Agricultural Commodities Produced, Australia, Preliminary* (7501.0) and *Value of*

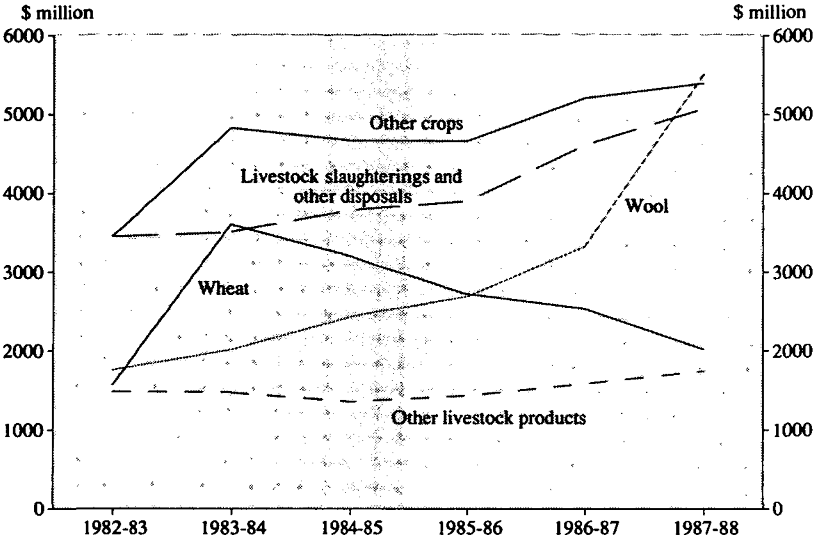
Selected Agricultural Commodities Produced, Australia, Preliminary (7502.0). A final publication, *Value of Agricultural Commodities Produced, Australia* (7503.0), also contains Indexes of Values at Constant Prices.

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 1984–85 with a reference base of 1984–85=1,000.

For further details on how these and earlier series were calculated *see Year Book* No. 61, and *Value of Agricultural Commodities Produced, Australia* (7503.0).

GROSS VALUE OF SELECTED AGRICULTURAL COMMODITIES
1981-82 TO 1987-88



GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED
($ million)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Crops—						
Barley for grain	732.6	759.3	586.8	432.6	459.8	568.6
Oats for grain	203.8	129.6	138.3	164.8	195.0	236.5
Wheat for grain	3,605.6	3,202.9	2,693.7	2,410.3	2,015.7	2,975.9
Other cereal grains	408.7	400.8	346.4	322.5	402.2	419.6
Sugar cane cut for crushing	516.6	512.2	494.2	586.4	618.2	751.8
Fruit and nuts	552.5	670.9	678.6	837.2	885.9	1000.2
Grapes	217.0	259.4	270.0	272.2	353.7	462.4
Vegetables	738.6	628.8	713.6	885.4	952.9	1,197.3
All other crops*(a)*	1,451.1	1,303.5	1,430.4	1,706.7	1,928.6	2,293.8
Total crops	*8,426.5*	*7,867.4*	*7,352.0*	*7,618.1*	*7,812.0*	*9,906.1*

For footnotes *see* end of table.

GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED—*continued*
(*$ million*)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Livestock slaughterings and other disposals*(b)*—						
Cattle and calves*(c)*	2,118.0	2,253.2	2,393.9	2,833.3	3,057.0	3,197.6
Sheep and lambs	585.0	576.1	531.6	721.2	803.9	738.3
Pigs	375.5	438.1	*(d)*438.3	*(d)*468.5	*(d)*536.1	*(d)*628.7
Poultry	430.2	512.6	*(d)*559.1	*(d)*601.7	*(d)*671.2	*(d)*727.6
Total livestock slaughterings and other disposals(e)	*3,508.6*	*(e)3,783.3*	*(d)3,923.0*	*(d)4,624.6*	*(d)(e)5,074.3*	*(d)5292.2*
Livestock products—						
Wool	2,016.1	2,434.4	2,693.4	3,333.6	5,516.6	5,906.0
Milk	1,153.2	1,035.4	1,106.7	1,257.4	1,390.9	1,635.1
Eggs	295.2	291.2	297.7	291.6	304.4	321.4
Total livestock products(f)	*(g)3,489.8*	*(h)3,792.8*	*(i)4,125.3*	*(i)4,915.6*	*(h)7,256.2*	*(j)7,910.8*
Total value of agricultural commodities produced	**15,424.9**	**15,443.5**	***(k)*15,406.9**	***(k)*17,166.5**	***(k)*20,151.8**	***(l)*23,120.0**

(a) Includes pastures and grasses. Excludes crops for green feed or silage. *(b)* Includes net exports of livestock. *(c)* Includes dairy cattle slaughtered. *(d)* Excludes Northern Territory pigs and poultry. *(e)* Includes goat slaughterings and exports. *(f)* Includes honey and beeswax. *(g)* Includes Australian Capital Territory milk and eggs. Excludes Northern Territory milk. *(h)* Includes cashmere, cashgora, mohair, liquid goat milk, honey and beeswax. Excludes Northern Territory and Australian Capital Territory milk and eggs. *(i)* Excludes Northern Territory and Australian Capital Territory milk and eggs. *(j)* Excludes Northern Territory milk and eggs. *(k)* Includes Northern Territory pigs, poultry, milk and eggs. *(l)* Includes Northern Territory pigs, poultry, milk and eggs and Australian Capital Territory milk and eggs.

INDEX OF VALUES AT CONSTANT PRICES OF AGRICULTURAL COMMODITIES PRODUCED(a)
(Base year: 1984–85 = 1,000)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Crops—						
Barley for grain	880	1,000	876	645	625	596
Oats for grain	1,630	1,000	943	1,171	1,275	1,325
Wheat for grain	1,179	1,000	865	880	652	750
Other cereal grains	1,107	1,000	974	924	970	899
Sugar cane*(b)*	917	1,000	987	967	978	1,035
Fruit and nuts	872	1,000	1,007	1,099	1,153	1,121
Grapes	927	1,000	1,018	936	921	1,002
Vegetables	865	1,000	988	1,046	1,172	1,163
All other crops*(c)*	884	1,000	1,019	1,056	1,087	1,143
Total	*1,028*	*1,000*	*933*	*933*	*862*	*908*
Livestock slaughterings and other disposals—						
Cattle and calves*(d)*	1,026	1,000	1,057	1,138	1,202	1,125
Sheep and lambs	949	1,000	1,065	1,107	1,077	983
Pigs	973	1,000	1,041	1,086	1,140	1,155
Poultry	863	1,000	1,062	1,112	1,167	1,195
Total(e)	*986*	*1,000*	*1,057*	*1,124*	*1,171*	*1,116*
Livestock products—						
Wool	877	1,000	1,002	1,070	1,109	1,156
Milk	981	1,000	996	1,019	1,015	1,038
Eggs	1,060	1,000	1,010	1,022	1,051	1,012
Total(f)	*920*	*1,000*	*1,000*	*1,052*	*1,078*	*1,112*
Total agricultural commodities produced	**991**	**1,000**	**980**	**1,009**	**991**	**1,009**

(a) Indexes of values at constant prices (weighted by average unit values of the year 1984–85). *(b)* Sugar cane cut for crushing and planting. *(c)* Includes pasture 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

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 obtained by using the mean resident population for the period.

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	*1982–83*	*1983–84*	*1984–85*	*1985–86*	*1986–87*	*1987–88*
Meat and meat products—						
Meat (carcass equivalent weight)						
Beef	42.4	39.9	40.0	39.3	37.5	37.4
Veal	3.5	2.4	2.1	2.1	1.9	1.8
Beef and veal	*45.9*	*42.3*	*42.1*	*41.4*	*39.4*	*39.3*
Lamb	16.2	16.9	17.1	16.9	15.0	14.9
Mutton	4.5	5.2	6.6	7.1	7.4	8.0
Pigmeat*(a)*	15.3	16.4	16.4	17.0	16.8	17.6
Total	*81.7*	*80.9*	*82.2*	*82.3*	*78.5*	*79.7*
Offal and meat, n.e.i.	4.4	3.4	2.8	2.7	3.4	3.6
Total meat and meat products	**86.1**	**84.3**	**85.0**	**85.0**	**82.0**	**83.3**
Poultry—						
Poultry (dressed weight)	20.3	20.0	21.8	23.0	23.5	24.7
Milk and milk products—						
Market milk (fluid whole)(litres)	102.9	101.6	101.8	102.5	102.9	101.5
Cheese (natural equivalent weight)	7.4	7.7	8.1	7.9	8.1	8.3
Oils and fats—						
Butter	4.0	3.9	3.9	3.8	3.5	3.2
Margarine						
Table margarine	6.8	6.9	6.6	6.9	6.8	6.6
Other margarine	2.8	2.7	2.3	2.1	2.1	2.2
Total margarine	*9.6*	*9.6*	*8.9*	*9.0*	*8.9*	*8.8*
Beverages—						
Tea	1.4	1.5	1.4	1.4	1.3	1.2
Coffee*(b)*	2.0	2.1	2.0	1.6	1.8	2.1
Aerated and carbonated waters (litres)	65.7	63.0	67.3	73.0	73.6	80.0
Beer (litres)	121.6	117.8	114.5	115.5	111.3	110.8
Wine (litres)	19.7	20.4	21.3	21.6	21.0	20.6
Spirits (litres alcohol)	1.2	1.1	1.2	1.3	1.2	1.2

(a) Includes bacon and ham. *(b)* Coffee and coffee products in terms of roasted coffee.

Financial Statistics

Estimates of selected financial aggregates of enterprises predominantly engaged in agricultural activity are shown in the following tables. The estimates have been derived from the Agricultural Finance Survey (AFS), which was conducted on an irregular basis until 1986–87 when it was re-introduced as an annual survey. From 1986–87 the population for the AFS consisted of all management units classified to an industry class within Sub-division 01 'Agriculture' of the Australian Standard Industrial Classification (ASIC) and with an EVAO of $20,000 or more. The notation 'S.E.%' stands for 'standard error %' which is a measure of the sampling error resulting from the use of sampling techniques as opposed to the results which would have been obtained from a comparable complete collection. A more detailed explanation of standard errors and other terms used in the tables, as well as more detailed statistics, is given in the publication *Agricultural Industries, Financial Statistics, Australia, 1987–88* (7507.0).

ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF AGRICULTURAL ENTERPRISES(a), 1977-78, 1980–81 AND 1986–87 TO 1988–89p

	1977–78		*1980–81*		*1986–87*		*1987–88*		*1988–89p*	
	$m	*S.E. %*	*$m*	*S.E. %*	*$m*	*S.E. %*	*$m*	*S.E. %*	*$m*	*S.E. %*
Sales from crops	2,281.5	2	4,543.7	1	6,350.1	2	6,507.7	2	6,619.2	3
Sales from livestock	1,677.8	2	3,134.6	2	4,447.2	2	5,052.1	2	5,330.3	3
Sales from livestock products	1,682.0	1	2,422.2	2	4,261.5	2	6,024.1	2	6,445.5	2
Turnover	5,874.2	1	10,439.7	1	16,094.2	1	18,708.0	1	19,494.0	1
Purchases and selected expenses	2,838.7	1	5,283.5	1	8,731.6	1	9,852.5	1	10,201.4	2
Value added*(b)*	2,869.9	1	5,034.9	2	8,899.4	2	10,187.0	2	11,290.3	2
Adjusted value added*(b)*	2,472.6	2	4,471.7	2	7,886.1	2	9,108.5	2	10,167.8	3
Gross operating surplus*(b)*	1,896.4	2	3,669.1	2	6,508.6	2	7,511.1	2	8,449.	3
Interest paid	n.a.		n.a.		1,581.0	3	1,473.6	3	1,625.2	4
Cash operating surplus*(c)*	1,801.6	2	3,419.1	2	3,678.9	3	4,999.9	3	5,172.2	3
Total net capital expenditure	772.7	3	1,301.3	3	1,212.0	5	1,566.1	4	1,828.9	4
Gross indebtedness	3,395.8	3	4,941.0	3	11,152.4	3	11,425.6	4	12,277.0	5
Number of enterprises	**169,560**		**169,158**		**113,764**		**114,315**		**107,747**	

(a) Data for 1986–87 onwards are not strictly comparable with previous periods. *See* explanatory notes above. *(b)* Includes an estimate for the value of the increase in livestock. *(c)* Excludes an estimate for the value of the increase in livestock.

ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF AGRICULTURAL ENTERPRISES, 1988–89p
($ million)

	NSW	*S.E. %*	*Vic.*	*S.E. %*	*Qld*	*S.E. %*	*SA*	*S.E. %*	*WA*	*S.E. %*	*Tas.*	*S.E. %*	*Aust.(a)*	*S.E. %*
Sales from crops	1,712.9	4	982.2	6	1,897.3	6	733.8	8	1,132.6	5	110.8	11	6,619.2	3
Sales from livestock	1,747.1	5	886.5	5	1,375.4	7	351.0	6	466.2	7	118.6	6	5,330.3	3
Sales from livestock products	2,153.1	4	1,532.3	5	710.4	6	618.7	7	1,144.2	4	2,327	6	6,445.5	2
Turnover	5,997.5	2	3,585.3	3	4,227.1	4	1,785.3	4	2,889.0	2	503.0	4	19,494.0	1
Purchases and selected expenses	3,240.6	3	1,844.0	4	2,267.6	5	824.0	4	1,516.4	3	262.8	5	10,201.4	2
Value added*(b)*	3,356.1	3	1,874.2	4	2,895.4	7	957.7	6	1,514.8	4	277.9	5	11,290.3	2
Adjusted value added*(b)*	2,989.2	3	16,58.1	5	2,667.1	8	856.3	6	1,367.2	4	250.5	6	10,167.8	3
Gross operating surplus*(b)*	2,445.9	4	1,321.4	6	2,288.5	9	688.9	8	1,203.3	5	193.3	6	8,449.6	3
Interest paid	516.7	7	294.2	11	399.6	11	157.6	12	192.2	8	39.7	10	1,625.2	4
Cash operating surplus*(c)*	1,388.4	7	936.3	7	1,038.9	8	591.6	9	935.7	6	121.2	11	5,172.2	3
Total net capital expenditure	486.6	8	383.5	9	443.3	11	164.2	11	295.2	7	37.2	14	1,828.9	4
Gross indebtedness	3,738.2	8	2,164.9	11	3,148.9	13	1,117.0	11	1,522.9	6	294.3	9	12,277.0	5
Number of enterprises	31,842	2	267,870	3	22,351	2	11,776	4	11,337	2	3,035	3	107,747	1

(a) Includes ACT, NT and estimates for multi-State enterprises. *(b)* Includes an estimate for the value of the increase in livestock. *(c)* Excludes an estimate for the value of the increase in livestock.

Land Utilisation in Australia

The total area under tenure differs from the total area of agricultural establishments (shown in the following table) 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)

At 31 March	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*Aust. (incl. ACT)*
1984	64.0	14.3	158.1	62.1	114.3	2.2	73.7	488.6
1985	63.7	14.2	157.2	62.7	114.0	2.1	74.0	488.0
1986	60.0	13.2	154.3	57.9	109.6	1.9	71.4	468.3
1987	60.8	13.1	151.7	59.5	112.7	1.9	71.2	471.0
1988	61.5	13.1	152.5	60.0	113.5	1.9	69.6	472.0
1989	61.6	13.1	151.3	58.0	112.6	1.9	68.3	466.9

LAND UTILISATION: AUSTRALIA
(million hectares)

	Area of—			*Total*	
Year	*Crops(a)*	*Sown pastures and grasses*	*Balance(b)*	*Area of establishments*	*Percentage of Australian land area (768,284,000 hectares)*
1983–84	22.0	26.1	440.5	488.6	63.6
1984–85	21.1	27.1	439.8	488.0	63.5
1985–86	20.6	26.4	421.3	468.3	61.0
1986–87	19.8	27.3	423.9	471.0	61.3
1987–88	18.4	28.6	425.0	472.0	61.4
1988–89	17.5	30.2	419.2	466.9	60.8

(a) Excludes pastures and grasses harvested for hay and seed which have been included in 'sown pastures and grasses'.
(b) Used for grazing, lying idle, fallow, etc.

The total area of agricultural establishments in 1988–89 constituted 60.8 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 include large areas of arid or rugged land held under grazing licences but not always used for grazing. Balance data also include variable amounts of fallow land.

The crop area data represent up to 3.7 per cent of the area of agricultural establishments and emphasise the relative importance of the livestock industry in Australia.

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 1870–71.

AREA OF CROPS(a)
('000 hectares)

Year	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
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
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
1984–85	5,789	2,569	3,047	2,902	6,723	99	6	1	21,136
1985–86	5,990	2,528	3,231	3,039	5,970	88	7	1	20,853
1986–87	5,325	2,317	3,036	3,066	5,930	78	12	—	19,764
1987–88	4,908	2,159	2,870	2,990	5,334	84	13	1	18,359
1988–89	4,560	1,990	2,842	2,961	5,082	82	11	1	17,527

(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 a summary of the area, production and gross value of the principal crops in Australia.

CROPS: AREA, PRODUCTION AND GROSS VALUE

	1986–87			*1987–88*			*1988–89*		
	Area ('000 ha)	*Production ('000 tonnes)*	*Gross value ($m)*	*Area ('000 ha)*	*Production ('000 tonnes)*	*Gross value ($m)*	*Area ('000 ha)*	*Production ('000 tonnes)*	*Gross value ($m)*
Cereals for grain—									
Barley	2,274	3,548	433	2,346	3,417	460	2,190	3,242	569
Grain sorghum	818	1,419	162	745	1,633	208	625	1,244	194
Maize	58	206	31	56	208	32	52	217	36
Oats	1,140	1,584	165	1,275	1,698	195	1,309	1,838	237
Rice	96	608	85	106	740	117	97	748	147
Wheat	11,135	16,119	2,410	9,005	12,287	2,016	8,827	13,935	2,976
Legumes for grain	1,244	1,315	294	1,615	1,342	330	1,473	1,444	371
Crops for hay—									
Oats	205	676	58	228	714	61	220	749	77
Wheat	67	186	15	76	200	17	71	198	19
Crops for green feed, silage—									
Barley	85			91			84		
Forage sorghum	177	n.a.	n.a.	212	n.a.	n.a.	182	n.a.	n.a.
Oats	645			759			684		
Wheat	71			60			35		
Sugar cane cut for crushing	300	24,742	586	307	24,832	618	314	27,146	752
Tobacco	5	12	65	5	13	73	5	11	67
Cotton	156	612	373	245	762	425	194	812	537
Peanuts (in shell)	34	48	42	32	37	33	22	25	26
Soy Beans	54	90	27	43	69	29	71	130	53
Rapeseed	65	76	18	58	66	18	43	58	21
Sunflower	193	137	34	200	216	66	185	172	56
Fruit (excl. grapes)	107	—	837	109	—	886	115	—	1,000
Fruit—									
Orchard	89	—	634	91	—	670	96	—	763
Oranges	n.a.	504	126	n.a.	479	146	n.a.	399	182
Apples	19	325	204	19	300	186	20	323	239
Pears	n.a.	145	77	n.a.	162	78	n.a.	142	66
Peaches	n.a.	61	41	n.a.	66	48	n.a.	52	45
Bananas	9	156	127	9	160	133	9	196	141
Pineapples	6	142	42	6	147	41	7	154	45
Grapes	57	783	272	57	799	354	58	859	462
Vegetables	111	—	885	117	—	953	119	—	1,197
Potatoes	37	1,015	272	40	1,082	270	38	1,048	326
Total, all crops (excluding pastures)	**19,764**	**—**	**7,199**	**18,359**	**—**	**7,416**	**17,527**	**—**	**9,388**

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.

Wheat

Industry Profile

Wheat is Australia's most important crop. It is produced in all States but primarily on the mainland in a narrow crescent known as the wheat-belt. Inland of the Great Dividing Range, the wheat-belt stretches in a curve from central Queensland through New South Wales, Victoria and southern South Australia. In Western Australia, the wheat-belt continues around the south west of the State and some way north up the western side of the continent. The main physical determinants of the location of wheat production in Australia are total rainfall, its seasonal distribution and reliability, topography, soil type and soil fertility.

Wheat growing in Australia continues to be essentially a family business. Around 90 per cent of farms are owned by either a sole proprietor or family partnership. Few farmers employ more than one full-time assistant although contractors may often be used on a seasonal basis. About thirty-two thousand, or one in four, Australian farms grow wheat, which may be only one of several complementary activities undertaken on the farm, including growing of other crops and raising of various livestock.

Wheat is by far the largest and most valuable crop produced in Australia. The average annual gross value of wheat production approaches $3 billion, generating up to around $2.5 billion in annual export revenue. This represents about 13 per cent of the total value of farm production, 17 per cent of the value of total farm exports and over five per cent of Australia's total exports of goods and services. The wheat industry makes a substantial contribution to rural income and the economies of hundreds of rural communities. It also contributes significantly to Australia's total economic welfare through its positive impact on export earnings and the current account balance.

Australia in the world environment

Australia is a relatively small producer of wheat by world standards. Average production of about 15 million tonnes represents less than 3 per cent of the world total. By comparison, annual production of each of the USSR and China, the world's largest producers, is approaching 100 million tonnes. However, Australia exports about 85 per cent of its wheat production and is therefore much more significant in world trade terms. Average exports of just under 13 million tonnes make a considerable contribution to the 100 million tonnes of wheat traded each year. Australia is the world's fourth largest wheat exporter.

Wheat industry arrangements

Current industry arrangements have evolved over fifty years through a process of negotiation between all interested industry participants. Wheat Acquisitions Regulations were made on 21 September 1939 under the *National Security Act 1939*. These Regulations constituted the Australian Wheat Board (AWB) to 'purchase, sell and dispose of wheat and wheat products, and handle, store and ship wheat'. They were replaced by the *Wheat Industry Stabilization Act 1948*, when growers and governments at Commonwealth and State levels agreed on the need for organised marketing and a wheat stabilisation plan to provide security to the industry. The Australian Constitution divides powers between the Commonwealth Government and the State Governments. Complementary State legislation was therefore required to give effect to the provisions of Commonwealth legislation within the states. The 1948 Act applied for five years, from and including the 1948-49 season. It has been succeeded by a further eight Acts, the latest of which, the *Wheat Marketing Act 1989*, applies from 1 July 1989 and does not have a predetermined life span.

There have been a number of constant elements of the legislation-based industry arrangements: The AWB has been maintained as the central marketing and operating arm of the industry; sales revenue and marketing costs have been pooled on a seasonal and quality basis; and the Commonwealth has provided contingent support under predetermined conditions to reduce grower's price risk. There have also been some underlying evolutionary developments in these industry arrangements: legislative specification of operational procedures has been reduced in conjunction with greater accountability of the AWB to Parliament and industry; the structure and level of Commonwealth support has become increasingly conservative; and there have been progressive endeavours to improve the timeliness and accuracy of international market price signals reflected to Australian wheat growers.

Role of the Australian Wheat Board

The AWB's objectives under the 1989 legislation are:

- to maximise the net returns to Australian wheat growers who sell pool-return wheat to the AWB by securing, developing and maintaining markets for wheat and wheat products and by minimising costs as far as is practicable; and
- by participating, in a commercial manner, in the market for grain and grain products to provide Australian grain growers, and especially wheat growers, with a choice of marketing options.

These objectives represent an expansion of the AWB's responsibilities from previous arrangements. Firstly, the requirement to maximise net returns obliges the AWB to minimise storage, handling and transport costs and so increases its direct responsibilities in this area. Secondly, conditional participation in markets for grain and grain products imposes a broader commercial charter covering other grains and value adding activities. Thirdly, the AWB is empowered to market grains other than wheat and is required to provide Australian grain growers with a choice of marketing options. In respect of this requirement, the AWB has become involved in marketing a range of non-wheat grains and will continue to make its expertise and skills available for the marketing of other non-regulated grains.

Export marketing

The AWB retains sole responsibility for marketing all Australian wheat produced for export, although it may also provide written consent for others to export wheat. The AWB is one of many competitors in the international market and must compete on commercial terms with all other participants. The AWB's market share is too small to enable it to exert monopoly influences on world markets, but significant benefits can nevertheless be achieved for Australian wheat growers through the AWB's central export seller role. These benefits include promotion and sale of Australian wheat as a distinct product with known and reliable quality; allocation of stocks to maximise aggregate returns and long term market opportunities; coordinated management of commodity, credit, exchange, freight, interest and other risk exposures; negotiation of long term agreements and establishment of credentials as a reliable supplier; economies of scale; increased bargaining power; and the diversification of growers' risk across markets.

Australia's wheat is traditionally exported to more than fifty different countries although a substantial proportion is accounted for by a limited number of major markets including the USSR, China Egypt, Iraq, Iran and Japan. Exports are geographically diverse but centred on an area spanning from Egypt and the Middle East through South Asia, South East Asia, North Asia and the Pacific region. The AWB has endeavoured to combine excellent relations with the largest importers and intimate concern for the requirements of even the smallest customers. That strategy has been supported by progressive development of marketing support, technical assistance and promotional activities to develop and maintain customer loyalty to the AWB and Australian wheat. Those activities have concentrated in particular on the quality features of Australian wheat, namely its white, clean, dry and insect free characteristics. Regardless of the international marketing environment, these are perceived to be fundamental to the continuing success of Australia's wheat marketing activities.

The AWB has coordinated industry development of a comprehensive wheat quality program to ensure that Australia's wheat maintains its excellent international quality reputation. That program is based on classification and varietal control which takes account of physical criteria such as test weight, moisture content and the percentage of foreign material. The other main determinants of wheat quality are protein content, grain hardness, dough properties and milling qualities. Of these, protein content has the greatest influence on overall processing quality. Although wheat varieties differ in their capacity to accumulate protein, protein content is principally determined by the environment. The other three quality factors are mainly related to wheat variety although there may be some environmental influence.

Domestic marketing

Under the 1989 legislation, the domestic market (except in Queensland) was deregulated through the removal of the AWB's compulsory acquisition powers and the termination of administered domestic pricing arrangements. Wheat for domestic use can now be freely traded by any operator. Growers have the choice of either selling for cash to the AWB or another buyer, or delivering their wheat to an AWB pool. The AWB has established a separate trading division to operate independently of the pool, thus enabling it to compete with other traders on the domestic market. In Queensland, domestic marketing arrangements continue to be regulated by State legislation.

Grower payment arrangements

A small proportion of wheat is traded and paid for on a commercial basis in the deregulated domestic market. The majority of wheat produced in Australia is delivered for marketing and payment within the AWB's pooling system. Criteria for establishment of pools include the period in which the wheat is delivered, the quality of the wheat and the delivery location. The pools are established to facilitate the equitable and cooperative distribution of costs incurred and returns generated from the marketing of wheat. A number of category pools are established for each season and further segregations or grades may be defined within the pools on the basis of quality, variety or other characteristics.

Payments are made in instalments to growers who deliver into the AWB's pooling system. The first payment is known as the Harvest Payment and is usually paid during the November–January period, within three weeks of delivery by the grower. This is by far the largest payment, amounting to approximately 80 per cent of the anticipated total payment. Another payment, the Post-Harvest Payment is calculated shortly after completion of the national harvest and paid during March. There may then be one or more subsequent payments, including a Final Payment, as sales revenues are received in excess of borrowings. Finalisation or 'realisation' of a pool may take a number of years since not all the wheat is sold immediately and some may be sold on credit terms ranging up to three years. A number of payment options are available to growers from the AWB for all payments except the Final Payment. These options provide growers with flexibility to enhance their financial management, including cash flow and tax planning aspects.

Financing grower payments

Wheat growers who deliver wheat to the AWB pooling system receive Harvest and Post-Harvest Payments well in advance of the subsequent sale of most of that wheat. The AWB finances those payments through an extensive domestic and international borrowing program worth up to about $A3 billion annually. These borrowings are raised at competitive market rates from commercial financial institutions. The borrowings are subsequently retired as revenues are generated by wheat sales. The AWB's borrowings are concentrated in short-term facilities because of the seasonal structure of grower payments and wheat sales. The AWB has become the biggest commercial short-term borrower in Australia and one of the biggest in the world.

Under the 1989 legislation, the Commonwealth has introduced a significant change to industry support arrangements. Whereas the Commonwealth previously guaranteed the payment of a minimum price to growers each season, it now provides a guarantee for a predetermined proportion of the AWB pool return borrowings. That proportion will be phased down from 90 per cent for the 1989–90 season to 80 per cent by the 1993–94 season.

WHEAT: AREA, PRODUCTION AND RECEIVALS

	Area(a)		Production(a)		Australian Wheat Board receivals(b)
Season	*For grain*	*All purposes*	*Grain*	*Gross value*	
	'000 ha	'000 ha	'000 tonnes	$m	'000 tonnes
1983–84	12,931	13,025	22,016	3,605.6	21,059
1984–85	12,078	12,150	18,666	3,202.9	17,544
1985–86	11,682	11,766	15,999	2,693.7	15,085
1986–87	11,135	11,274	16,119	2,410.3	15,288
1987–88	9,005	9,141	12,287	2,015.7	10,740
1988–89	8,827	8,932	13,935	2,975.9	12,954

(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.

WHEAT FOR GRAIN: AREA AND PRODUCTION, BY STATE

Season	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*Aust.*
			AREA ('000 hectares)				
1983–84	3,999	1,614	1,006	1,564	4,746	2	12,931
1984–85	3,603	1,523	921	1,378	4,652	2	12,078
1985–86	3,663	1,508	973	1,443	4,148	2	11,682
1986–87	3,099	1,364	795	1,616	4,260	2	11,135
1987–88	2,464	1,026	646	1,556	3,312	1	9,005
1988–89	2,309	931	768	1,520	3,297	1	8,827
			PRODUCTION ('000 tonnes)				
1983–84	8,961	3,971	1,922	2,843	4,316	3	22,016
1984–85	5,805	2,666	1,579	2,031	6,580	4	18,666
1985–86	5,898	2,316	1,686	1,781	4,313	4	15,999
1986–87	4,855	2,795	833	2,255	5,377	5	16,119
1987–88	3,997	1,882	718	1,803	3,882	4	12,287
1988–89	4,105	1,691	1,550	1,361	5,225	2	13,935

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.

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 therefore 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 also grown 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.

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.

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.

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 97 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 New South Wales. 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 New South Wales growers. In Queensland, a winter and a summer crop are grown.

State statutory marketing boards are responsible for the marketing of the New South Wales and Queensland crops.

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. 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.

For area, production and gross value of several oilseed crops, *see* Crops: area, production and gross value in the Crops section of this chapter.

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. 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. Crushings 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 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.

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.

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 fertiliser, 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.

COTTON: AREA, PRODUCTION AND EXPORTS

		Seed cotton(a)				*Raw cotton export*	
Year	*Area*	*Quantity*	*Gross value*	*Cotton-seed(b)*	*Lint*	*Quantity*	*Value f.o.b.*
	'000 ha	'000 tonnes	$m	'000 tonnes	'000 tonnes	'000 tonnes	$m
1983–84	137	401	268.8	230	141	82	147.9
1984–85	183	679	330.2	410	248	140	259.6
1985–86	177	685	324.9	366	259	241	378.4
1986–87	156	612	372.5	418	214	251	344.7
1987–88	245	762	425.1	435	281	176	353.0
1988–89	194	813	565.8	449	286	286	460.0

(a) Before ginning. *(b)* Estimated by the Australian Bureau of Agricultural and Resource Economics.

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. Farm sizes range between 20 and 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 three in New South Wales. Fifteen of the mills are cooperatively 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. Area, production and yield levels for sugar cane from 1983–84 to 1988–89 are provided in the following table.

SUGAR CANE: AREA, PRODUCTION AND YIELD

	New South Wales					*Queensland*				
	Sugar cane cut for crushing			*Raw sugar(a)*		*Sugar cane cut for crushing*			*Raw sugar(a)*	
Year	*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
1983–84	15	1,468	96.7	159	10.5	292	22,723	77.8	3,012	10.3
1984–85	15	1,540	103.6	199	13.4	298	23,910	80.3	3,349	11.2
1985–86	15	1,398	91.1	170	11.1	288	23,004	79.8	3,209	11.1
1986–87	24	1,276	93.2	168	7.0	287	23,466	81.8	3,202	11.2
1987–88	27	1,632	60.4	195	7.2	360	23,200	64.4	3,483	9.7
1988–89	15	1,560	104.0	196	13.1	302	25,586	85.9	3,483	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 20 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.

Australia has regularly participated in arrangements to regulate the international sugar market and was a signatory to the 1984 International Sugar Agreement (ISA). The 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.

For further information on vegetables *see Year Book* No. 70.

VEGETABLES FOR HUMAN CONSUMPTION: AREA UNDER PRODUCTION

Year	*French and runner beans*	*Cabb-ages*	*Carrots*	*Cauli-flowers*	*Onions*	*Green peas*	*Potatoes*	*Tomatoes*	*Total vege-tables*
				AREA ('000 hectares)					
1983–84	6.7	2.5	4.3	3.4	3.8	12.2	37.9	9.1	109.9
1984–85	6.3	2.4	4.6	3.6	4.4	11.4	38.4	9.3	111.0
1985–86	5.9	2.3	4.3	3.6	4.5	11.2	36.1	9.5	110.7
1986–87	5.9	2.9	4.6	3.7	4.3	11.7	36.7	8.6	111.3
1987–88	6.0	2.8	4.6	3.4	5.0	11.2	39.8	8.9	116.7
1988–89	6.9	2.2	4.8	3.5	5.3	11.9	37.6	9.1	119.0

PRODUCTION OF VEGETABLES FOR HUMAN CONSUMPTION

						Green peas			
	French and runner beans	*Cabb-ages*	*Carrots*	*Cauli-flowers*	*Onions*	*Process-ing (shelled weight)*	*Sold in pod (pod weight)*	*Potatoes*	*Tomatoes*
				PRODUCTION ('000 tonnes)					
1983–84	32.3	72.3	124.3	84.4	115.9	44.0	2.1	1,019.8	258.3
1984–85	31.1	69.5	130.6	101.1	151.7	41.8	2.1	992.1	270.5
1985–86	31.3	69.1	127.6	103.8	159.7	39.7	1.5	964.9	252.6
1986–87	29.4	82.9	146.0	91.6	164.7	33.4	1.2	1,015.2	266.0
1987–88	32.7	80.1	144.0	112.2	181.7	43.0	1.2	1,081.5	282.6
1988–89	35.5	87.8	148.7	79.6	196.3	46.0	1.1	1,048.0	318.6

For further information on vegetables *see* the following publications: *Crops and Pastures, Australia* (7321.0), (ceased 1986–87) *Summary of Crops, Australia (7330.0) (first issue 1987–88). Apparent Consumption of Foodstuffs and Nutrients, Australia* (4306.0) *Value of Agricultural Commodities Produced, Australia* (7503.0), and *Year Book* No. 70.

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.

In recent years there has been rapid expansion in the cultivation of many relatively new fruit crops in Australia 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 $10 million. Avocado production is mainly in Queensland and New South Wales with minor quantities produced in Western Australia, South Australia and Victoria.

Kiwi fruit 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.

SELECTED FRUIT STATISTICS

	Orchard fruit: number of trees ('000)				*Tropical and other fruits: area (ha)*			
Year	*Apples*	*Oranges*	*Pears*	*Peaches*	*Bananas*	*Pineapples*	*Other fruit*	*Total area of fruit (ha)*
1983–84	6,066	6,397	1,584	1,646	9,282	6,011	2,085	107,534
1984–85	6,147	6,657	1,548	1,696	9,205	6,268	2,272	109,095
1985–86	6,397	6,777	1,592	1,793	9,640	6,325	2,432	112,655
1986–87	6,350	6,897	1,552	1,797	9,391	3,762	1,245	107,492
1987–88	6,555	6,873	1,779	1,867	9,195	6,269	2,024	166,100
1988–89	6,810	7,122	2,028	2,004	9,319	6,660	1,239	119,756

Year	*Apples*	*Apricots*	*Bananas*	*Cherries*	*Oranges*	*Peaches*	*Pears*	*Pine-apples*	*Plums and prunes*
				PRODUCTION ('000 tonnes)					
1983–84	267.0	23.6	146.4	3.5	391.8	48.3	122.1	115.1	20.0
1984–85	352.0	24.5	144.8	3.8	445.0	59.8	138.5	124.5	20.6
1985–86	292.1	29.6	134.4	3.9	496.2	61.4	142.9	131.6	21.7
1986–87	325.0	27.0	157.7	4.0	504.0	61.1	145.0	142.3	22.0
1987–88	300.0	28.0	160.1	5.0	479.0	66.0	162.0	146.5	18.0
1988–89	323.0	27.9	195.8	4.0	399.2	51.9	142.1	154.4	19.9
				GROSS VALUE OF PRODUCTION ($ million)					
1983–84	134.1	17.6	86.8	8.7	105.3	25.4	45.9	26.2	17.5
1984–85	178.3	19.7	93.2	10.8	131.9	28.3	50.7	33.5	19.8
1985–86	139.0	24.5	101.7	9.5	132.5	29.3	63.7	32.6	23.5
1986–87	204.5	25.5	126.7	11.9	126.1	40.9	76.8	42.0	25.2
1987–88	185.8	31.7	132.6	16.2	146.4	48.1	77.7	41.4	22.9
1988–89	239.3	31.0	141.6	15.3	181.7	45.2	66.0	44.5	28.3

For further data on fruits and fruit products *see* the publications *Fruit, Australia* (7322.0) (ceased 1986–87), *Summary of Crops, Australia* (7330.0) (first issue 1987–88), *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 lesser extent, for table use. Some of the better known wine producing areas are the Barossa, Clare, Riverland, Southern Districts and Coonawarra (SA); North-Eastern Victoria and Great Western (Vic.); Hunter and Riverina (NSW); Sunraysia (NSW and Vic.); Swan Valley and Margaret River (WA).

Nearly all the dried fruit is produced along the River Murray and its tributaries in Victoria and New South Wales with small localised areas in other States.

VITICULTURAL STATISTICS: AREA, PRODUCTION AND VALUE

	Area		*Productions: grapes used for—*			
					Total(a)	
Year	*Bearing*	*Total*	*Winemaking*	*Drying*	*Quantity*	*Gross value*
	'000 ha	'000 ha	'000 tonnes fresh weight	'000 tonnes fresh weight	'000 tonnes fresh weight	$m
1983–84	60	65	495	320	841	217.0
1984–85	60	64	559	297	890	259.4
1985–86	60	64	510	359	907	270.0
1986–87	54	57	477	262	783	272.2
1987–88	54	57	460	293	799	353.7
1988–89	54	57	563	248	859	462.4

(a) Includes grapes used for table and other purposes.

Multipurpose grapes are used predominantly for winemaking and drying, the latter process being particularly susceptible to adverse seasonal conditions. Australian exporters have made significant sales on international markets. 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.

VITICULTURE: AREA AND PRODUCTION BY VARIETY, 1989 SEASON(a)

	Area of vines at harvest			*Grubbings (actual and/or intended)*	*Production*			
					Grapes used for—			
	Bearing	*Not yet bearing*	*All vines*		*Wine-making*	*Drying*	*Other*	*Total*
	—hectares—				—tonnes (fresh weight)—			
Red grapes—								
Cabernet Sauvignon	3,398	485	3,883	22	31,178	20	20	31,218
Currant (incl. Carina)	1,259	69	1,327	60	659	13,934	36	14,629
Grenache	2,195	26	2,221	51	33,640	—	116	33,756
Mataro	655	4	659	16	10,107	—	93	10,200
Pinot Noir	654	279	933	—	6,011	—	—	6,011
Shiraz	4,728	163	4,891	31	57,691	—	172	57,863
Other red grapes	3,127	596	3,724	96	15,330	122	11,898	27,350
Total red grapes	*16,016*	*1,622*	*17,638*	*276*	*154,616*	*14,076*	*12,313*	*181,027*

For footnotes *see* end of table.

VITICULTURE: AREA AND PRODUCTION BY VARIETY, 1989 SEASON(a)—*continued*

	Area of vines at harvest			*Grubbings (actual and/or intended)*	*Production*			
					Grapes used for—			
	Bearing	*Not yet bearing*	*All vines*		*Wine-making*	*Drying*	*Other*	*Total*
	—hectares—				—tonnes (fresh weight)—			
White grapes—								
Chardonnay	2,788	954	3,742	12	28,419	—	6	28,425
Doradillo	964	4	967	56	23,126	—	39	23,165
Muscat Blanc	482	7	487	9	6,736	—	36	6,771
Muscat Gordo Blanco	3,753	91	3,844	83	82,550	7,102	183	89,836
Palomino and Pedro Ximenes	1,361	10	1,371	57	22,371	—	70	22,441
Rhine Riesling	3,555	51	3,606	21	41,176	—	32	41,208
Semillon	2,573	135	2,708	32	40,127	—	88	40,216
Sultana	15,296	543	15,839	226	75,468	220,866	26,686	323,020
Waltham Cross	1,058	15	1,073	56	4,093	6,111	2,550	12,734
Other white grapes	5,839	496	6,336	118	84,260	139	5,544	89,943
Total white grapes	*37,669*	*2,306*	*39,975*	*671*	*408,326*	*234,218*	*35,234*	*677,779*
Total grapes	**53,686**	**3,925**	**57,613**	**947**	**562,922**	**248,294**	**47,549**	**858,785**

(a) Varietal data not collected in Northern Territory and the Australian Capital Territory.

Wine industry

Australia produces a wide range of wine and brandy products. Over the past twenty years there has been a distinct trend towards greater production and consumption of unfortified or table wines. In the twelve months ending June 1989 sales of table wine accounted for nearly 77 per cent of all sales of Australian wine. The large growth in table wine sales has been principally due to the successful marketing of wine in 'casks' (usually fibreboard, box-shaped, 4 litre containers equipped with dispensing faucets).

While imports of wine are relatively insignificant (9.7 million litres in 1988–89), exports are becoming increasingly important and now account for 8.1 per cent of production. Legislation reconstructing the Australian Wine and Brandy Corporation as the body responsible for the control of the export trade in wine, brandy and grape spirit products was enacted in June 1986. The Corporation has the power to regulate exports as well as organise promotion and publicity functions in export markets and in Australia.

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

	Hay(a)			Green feed or silage(b)	
		Production			
Year	Area	Quantity	Gross value	Area	Silage made
	'000 ha	'000 tonnes	$m	'000 ha	'000 tonnes
1983–84	377	1,262	99.5	896	698
1984–85	258	846	60.3	876	502
1985–86	252	773	64.5	1,005	603
1986–87	306	942	79.1	1,190	679
1987–88	344	1,003	85.8	1,313	878
1988–89	323	1080	106.8	1,152	825

(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.

FARMSTOCKS OF CEREAL GRAINS, HAY AND SILAGE
('000 tonnes)

	Cereal grains				
At 31 March	Barley	Oats	Wheat	Hay	Silage
1984	627	1,705	1,021	6,789	642
1985	684	1,479	910	5,872	697
1986	863	1,381	1,176	5,179	835
1987	729	1,406	1,045	5,783	817
1988	693	1,366	962	4,972	757
1989	702	1,550	1,028	5,550	975

Tobacco

Tobacco is a summer-growing annual which requires a temperate to tropical climate, adequate soil moisture and a 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.

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 1981 on by single years, are given in the following table.

LIVESTOCK, AUSTRALIA
('000)

Year	Cattle	Sheep	Pigs	Year	Cattle	Sheep	Pigs
1861	3,958	20,135	351	1961	17,332	152,579	1,615
1871	4,276	41,594	543	1971	24,373	177,792	2,590
1881	7,527	62,184	816	1981	25,168	134,407	2,430
1891	10,300	97,881	891	1982	24,553	137,976	2,373
1901	8,640	70,603	950	1983	22,478	133,237	2,490
1911	11,745	98,066	1,026	1984	22,161	139,242	2,527
1921	13,500	81,796	674	1985	22,784	149,747	2,512
1931	11,721	110,568	1,072	1986	21,820	146,776	2,512
1941	13,256	122,694	1,797	1987	21,915	149,157	2,611
1951	15,229	115,596	1,134	1988	21,851	152,443	2,706
				1989	22,434	161,603	2,671

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.

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 1960's and 1970s, despite seasonal changes and heavy slaughterings, 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 have since increased.

Beef cattle production is often combined with cropping, dairying and sheep. In the northern half of Australia, 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, BY AGE, SEX, PURPOSE
('000)

	31 March—					
Classification	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*
Milk cattle—						
Bulls used or intended for service	46	45	42	37	36	36
Cows, heifers and heifer calves	2,693	2,697	2,625	2,561	2,506	2,476
House cows and heifers	66	63	45	41	38	34
Total	*2,805*	*2,806*	*2,712*	*2,639*	*2,581*	*2,546*
Meat cattle—						
Bulls used or intended for service	498	524	512	513	528	551
Cows and heifers (1 year and over)	9,965	10,274	9,775	9,795	9,818	10,120
Calves under 1 year	4,455	4,897	4,598	4,738	4,716	4,816
Other cattle (1 year and over)	4,438	4,282	4,223	4,230	4,207	4,402
Total	*19,356*	*19,978*	*19,108*	*19,276*	*19,270*	*19,888*
Total, all cattle	**22,161**	**22,784**	**21,820**	**21,915**	**21,851**	**22,434**

CATTLE NUMBERS
('000)

31 March	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*Aust. (incl. ACT)*
1984	5,036	3,487	9,154	813	1,730	542	1,390	22,161
1985	5,226	3,576	9,413	846	1,674	554	1,484	22,784
1986	4,790	3,383	9,208	854	1,608	509	1,456	21,820
1987	4,868	3,478	9,011	912	1,660	535	1,439	21,915
1988	4,962	3,474	8,825	947	1,705	542	1,385	21,851
1989	5,329	3,509	8,994	943	1,702	560	1,388	22,434

Sheep

With the exception of a short period in the early 1860s, 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 180.0 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 151.7 million, but in March 1978 the numbers had fallen to 131.4 million, the lowest since 1955. 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 1989, flock numbers reached 161.6 million. Poorer market prospects for both wool and live sheep exports are affecting the 1990–91 season.

SHEEP NUMBERS
(millions)

31 March	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*Aust. (incl. NT, ACT)*
1984	51.0	24.6	13.0	16.4	29.5	4.6	139.2
1985	55.5	26.5	14.0	17.3	31.6	4.8	149.7
1986	51.5	25.7	14.2	17.5	32.9	4.8	146.8
1987	52.2	26.6	14.6	17.2	33.5	5.0	149.2
1988	54.9	27.0	14.4	17.4	34.0	4.7	152.4
1989	59.1	28.1	14.9	17.4	37.1	4.9	161.6

SHEEP, BY AGE AND SEX
(millions)

	Sheep: 1 year and over					
31 March	*Rams*	*Breeding ewes*	*Other ewes*	*Wethers*	*Lambs and hoggets (under 1 year)*	*Total, sheep and lambs*
1984	1.7	70.3	4.9	30.5	31.8	139.2
1985	1.8	71.0	5.4	33.3	38.3	149.7
1986	1.8	72.1	6.6	38.7	36.3	155.6
1987	1.7	72.1	4.2	37.5	33.6	149.2
1988	1.7	71.6	4.3	39.1	35.7	152.4
1989	1.8	74.8	4.7	43.7	36.6	161.6

The combined value of wool and sheep slaughtered during 1988–89 is estimated at 31.4 per cent of the gross value of agricultural commodities. This proportion varies with wool and meat prices and seasonal conditions. Australia has about 14 per cent of the world's woolled sheep but produces around 30 per cent of the world's greasy wool. In addition, in the year ended 30 June 1989 the sheep industry produced 768,718 tonnes of mutton and lamb. Exports of live sheep for slaughter during the same period totalled 6.9 million head, with Kuwait and Saudi Arabia accounting for 66 per cent of the total.

Pigs

Over the past 30 years there have 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.

PIGS NUMBERS
('000)

31 March	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*Aust. (incl. NT, ACT)*
1984	799	404	556	417	300	48	2,527
1985	814	410	563	402	274	47	2,512
1986	782	427	574	408	275	42	2,512
1987	830	432	579	422	295	46	2,611
1988	853	437	617	441	307	48	2,706
1989	855	423	611	450	285	45	2,671

Poultry

The commercial poultry industry comprising hatchery workers, egg producers and broiler growers is highly specialised, although a proportion of production comes from 'backyard' egg producers. There are separate research schemes, funded jointly by industry and government, for the egg and meat chicken industries. Both sectors are good examples of specialised, large scale, capital-intensive production.

POULTRY NUMBERS(a)
('000)

	Chickens			*Other poultry*			
31 March	*Hens and pullets for egg production*	*Meat strain chickens (broilers)*	*Total chickens(b)*	*Ducks*	*Turkeys*	*Other poultry*	*Total all poultry*
1984	14,075	31,318	47,529	370	535	239	48,673
1985	13,497	33,761	50,109	219	653	293	51,273
1986	13,646	35,497	51,565	282	579	365	52,791
1987	13,506	39,187	55,579	350	1,249	430	57,608
1988	13,463	47,988	64,201	663	1,585	365	66,813
1989	13,193	39,709	56,149	263	1,125	420	57,957

(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* 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)

	Carcass weight						Dressed weight(b)(c)	
Year	Beef	Veal	Mutton	Lamb	Pig meat	Total meat	Chickens	Total all poultry(d)
1983–84	1,303	42	169	296	253	2,064	272	298
1984–85	1,271	39	215	301	260	2,086	315	345
1985–86	1,344	41	258	320	271	2,234	334	367
1986–87	1,481	40	288	296	283	2,388	344	380
1987–88	1,549	39	293	293	297	2,471	(e)362	401
1988–89	1,459	32	254	290	308	2,343	(e)368	407

(a) Excludes offal. *(b)* Excludes the Northern Territory and the Australian Capital Territory. *(c)* Dressed weight of whole birds, pieces and giblets. *(d)* Includes other fowls, turkeys, ducks and drakes. *(e)* Excludes Tasmania.

NUMBERS OF LIVESTOCK AND POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION
(million head)

Year	Cattle	Calves	Sheep	Lambs	Pigs	Chickens (a)	Other fowls(b) and turkeys	Ducks and drakes
1983–84	6.0	1.3	8.4	17.1	4.4	216.2	10.2	1.7
1984–85	5.8	1.2	10.5	17.5	4.5	244.2	10.7	2.1
1985–86	6.2	1.2	13.0	19.1	4.5	258.3	11.6	2.3
1986–87	6.8	1.2	14.7	17.7	4.7	269.3	11.2	2.1
1987–88	6.9	1.2	14.9	17.2	4.9	(c)273.6	11.1	2.3
1988–89	6.3	1.0	12.4	16.5	5.0	(c)274.1	10.6	2.2

(a) Comprises broilers, fryers and roasters. *(b)* Comprises hens, roosters, etc. *(c)* Excludes Tasmania.

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 180.0 million in 1970 to a low of 131.0 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 136.0 million by March 1980. Since March 1980, flock numbers have fluctuated as a result of climatic and market conditions with a fairly steady growth from 1984 onwards. Total Australian sheep flock in March 1989 was 162 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 declined from a peak of 320,000 tonnes in 1985–86 to 293,000 in 1987–88, while mutton production has varied between 230,000 and 300,000 tonnes in recent years until 1983–84, when it declined to 169,000 tonnes. Production increased to 293,000 tonnes in 1987–88.

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.

Beef and veal

The cattle industry is very dependent on international trade in beef and is subject to great fluctuations. Over half of Australia's beef and veal production is exported, with the United States and Japan the main outlets.

Beef and veal production in Australia rose markedly in the 1970s, reaching peak levels of over 2.0 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 1960s and early 1970s 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. Higher slaughtering in 1987–88 was due to record beef prices in the US and a larger than expected number of tenders in Japan. Current projections by the Australian Meat and Livestock Corporation (AMLC) indicate that cattle numbers will slowly increase over the next few years. While slaughtering and production will fall slightly in the short term during the rebuilding process, numbers should expand to 25.5 million by 1992 implying a production increase of over 100,000 tonnes on 1987–88.

Of historical significance to the beef industry in 1988 was the opening of the Japanese and Korean beef markets which will provide substantial opportunities to increase beef exports in the coming years. To cater for the type of beef required by the Japanese market, the number of feedlots is expected to increase.

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 317,000 tonnes in 1989–90. 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 eight years.

In recent years a small but useful market for the meat of feral pigs has been established in Europe.

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.

EXPORTS OF FRESH, CHILLED OR FROZEN MEAT(a)
'000 tonnes

	Beef(b)(c)		*Veal(b)*		*Mutton(b)*		*Lamb*		
	Bone-in	*Bone-out*	*Bone-in*	*Bone-out*	*Bone-in*	*Bone-out*	*Bone-in*	*Bone-out*	*Pork*
1983–84	28.7	419.4	1.2	2.3	26.5	32.1	30.2	1.5	2.0
1984–85	10.5	395.8	1.6	3.6	21.6	38.1	26.3	1.4	3.2
1985–86	4.8	466.3	2.2	3.7	38.0	51.8	47.8	2.1	2.8
1986–87	4.6	555.3	2.1	3.5	49.9	57.9	53.7	1.5	3.9
1987–88	11.2	624.0	1.2	5.0	47.3	61.2	48.9	2.5	8.2
1988–89	47.4	493.6	1.0	5.3	32.6	53.7	34.9	2.7	6.6

(a) Excludes offal. *(b)* Factors can be applied to beef, veal, mutton and lamb bone-out figures to derive bone-in carcass weight which, when added to bone-in figures, shows total exports in carcass weight. The factor for beef and veal is 1.5 and that for mutton and lamb 2.0 (*Source*: Australian Meat and Livestock Corporation). *(c)* Includes buffalo meat.

GROSS VALUE OF LIVESTOCK SLAUGHTERINGS AND OTHER DISPOSALS(a)
($ million)

Year	*Cattle and calves*	*Sheep and lambs*	*Pigs*	*Poultry*	*Total*
1983–84	2,118.0	585.0	375.5	430.2	3,508.6
1984–85	2,253.2	576.1	438.1	512.6	*(b)*3,783.3
1985–86	2,367.3	531.6	438.3	559.1	3,896.4
1986–87	2,833.3	721.2	468.5	601.7	4,624.6
1987–88	3,057.0	803.9	536.1	671.2	*(b)*5,074.3
1988–89	3,197.6	738.3	628.7	727.6	5,292.2

(a) Includes adjustment for net exports of live animals. *(b)* Includes goats.

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 (i.e. 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 per cent for beef, 80 to 85 per cent for lamb and 80 per cent for pork.)

Wool

The Australian Sheep Flock contains nearly 14 per cent of the world's sheep and produces around 30 per cent of the total annual production of wool. This is largely due to the composition of the Australian flock. In 1989 over 70 per cent of Australia's 162 million sheep were from the Merino breed, which are raised primarily for their heavy fleece 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. The exact quantities of these impurities in the fleece vary between 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. In 1988–89 the yield of the Australian clip was 65.3 per cent.

SHEARING, WOOL PRODUCTION AND VALUE

			Wool production			
					Total wool	
Year	Sheep and lambs shorn	Average fleece weight	Shorn wool	Other wool(a)	Quantity	Gross value (b)
	million	kg	'000 tonnes	'000 tonnes	'000 tonnes	$m
1983–84	152.6	4.40	671.2	56.4	727.6	2,016
1984–85	168.2	4.48	752.7	61.6	814.4	2,434
1985–86	173.8	4.39	762.1	67.9	830.0	2,707
1986–87	180.8	4.50	813.7	76.6	890.4	3,334
1987–88	186.3	4.53	843.0	73.4	916.4	5,517
1988–89	196.4	4.58	898.9	60.1	959.0	5,906

(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.

The wool market

In Australia over 80 per cent of raw wool is offered at public auction. Prior to the sale, brokers receive growers wool into store and arrange sampling for measurement of the main variable physical characteristics. The wool is then offered for sale at a rostered auction. The balance of the clip is sold privately at prices agreed between the grower and buyer.

Wool receivals

The ABS collects details of the total amounts of taxable wool received by 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

	Receivals			
Year	Brokers (NCWSB)	Dealers(a)	Brokers and dealers	Dealers as per cent of total receivals
	—'000 tonnes—			per cent
1983–84	535.5	152.9	688.4	22.2
1984–85	588.3	164.0	752.2	21.8
1985–86	599.0	167.6	766.4	21.9
1986–87	625.8	187.5	814.0	23.0
1987–88	707.3	185.5	842.4	22.0
1988–89	755.1	136.4	891.5	15.3

(a) Includes brokers who are not members of the National Council of Wool Selling Brokers of Australia (NCWSB).

The Australian Wool Corporation (AWC) is a Commonwealth statutory authority, established at the request of the nation's woolgrowers to undertake a number of functions on their behalf, principally to stimulate the demand for Australian wool. Most important among these functions are the Reserve Price Scheme in the raw wool market, comprehensive global wool promotion programs, and a program of research and development.

Under the terms of the Wool Tax Act, all growers pay a tax on the gross value of shorn wool sales to provide financial backing for the operations of the Corporation.

The Reserve Price Scheme was introduced in its current form in 1974 and seeks to provide a measure of wool price stability, in Australian dollar terms, to the benefit of the industry.

A minimum price for each wool type is established at the commencement of each wool selling season which runs from July to the following June. Any wool which fails to attract bids equal to or higher than this minimum is purchased by the Corporation at that price and held until demand improves. In addition, when the market is trading above these minimum price levels, the Corporation may intervene in the market with the aim of providing market stability. This may be needed, for instance, when there is exchange rate uncertainty or when the market enters a cycle of volatile price change.

In addition to the management of the Reserve Price Scheme, wool promotion and the research and development program the Australian Wool Corporation has a number of the other responsibilities. These include: establishing, monitoring and when necessary enforcing industry clip preparation standards; shearer training; and encouraging efficiency within the sphere of wool handling and transport. It also operates extensive commercial storage facilities on the industry's behalf.

Wool testing

The Australian Wool Testing Authority provides objective measurement for over 90 per cent of the clip. It 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 99 per cent of all wool sold at auction is accompanied by certified measurements for average fibre diameter, yield, (i.e. the amount of clean wool fibre), and the percentage and type of vegetable fault.

During 1986–87, commercial testing commenced for the additional characteristics of staple length and strength. In 1988–89 almost 20 per cent of all combing wool sold at auction was accompanied by these measurements and this figure is expected to approach 50 per cent of the offering in 1989–90. To encourage the adoption of additional measurement by woolgrowers, the AWC paid a premium of 10 cents/kg clean for all wool purchased by the Corporation during the 1988–89 and 1989–90 seasons. The cost to the grower of the additional length and strength measurements was around 4 cents/kg clean in 1989–90.

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 AWTA Ltd.

Wool promotion

Since 99 per cent of the Australian wool clip is exported, a major activity of the AWC is demand stimulating activities carried out in manufacturing and consumer markets around the world. These programs, which are mostly conducted through the International Wool Secretariat (IWS), became more important in the 1960s because of the challenge to wool consumption posed by synthetic fibres. In more recent times these programs have again been increased in an effort to ensure wool's future as a preferred textile fibre in the world's major consumer markets. Growers have financed wool promotion since its inception; in the 1989–90 season grower support was through a levy of 3.5 per cent of gross wool sales revenue. This was boosted by a Commonwealth government contribution of $25 million. The IWS operates actively in more than 50 countries around the world, and is also supported by the wool industries of New Zealand, South Africa and Uruguay.

Wool research

Australian woolgrowers have financed industry research programs since 1937. In recent times this was coordinated through the Wool Research Trust Fund to which both the woolgrowers and the Commonwealth Government contributed. The Fund was administered by the Commonwealth Department of Primary Industries and Energy.

From 1 July 1986, the task of determining industry research priorities and allocating funds was transferred to a new body, the Wool Research and Development Council which was constituted as a committee of the AWC.

Major recipients of wool industry research funds include the Commonwealth Scientific and Industrial Research Organisation (CSIRO)—especially in the fields of wool textiles and wool production; Bureau of Agricultural and Resource Economics; universities and State departments of agriculture/primary industry.

Stocks of raw and semi-processed wool are held by Australian wool processors, scourers, fellmongers, brokers, dealers and the AWC. They exclude wool on skins.

Wool processing

During the 1970s there was a trend to increased early stage processing of Australian wool before export. The last few years has seen a further wave of investment in this area, with some expansion of existing facilities and some new plants being built. There is now sufficient capacity in Australia to semi-process over 20 per cent of the Australian wool clip prior to export.

Export of wool

From its earliest days the Australian wool industry has been export oriented, and today approximately 99 per cent of total annual production of wool is exported.

Most of the Australian wool clip is exported in its natural 'greasy' state. Around 18 per cent of wool exported in 1988–89 was in semi-processed forms (i.e. scoured, carbonised, top and noil) with a significant quantity of wool also exported on sheep skins.

Dairying

Dairying is a major Australian rural industry, ranking fourth behind the wheat, wool and beef industries in terms of value of production. The gross value of dairy production at farm gate prices in 1988–89 was A$1,600 million or approximately eight per cent of the gross value of rural production. The gross value of this industry at an ex-factory level is approximately A$4,000 million per annum. The industry is also one of Australia's leading rural industries in terms of the proportion of down stream employment and processing it generates. Employment at manufacturing, processing and farm establishments is estimated to be in the vicinity of 50,000 people.

Production

Australian milk production in 1989–90 was 6,260 million litres, a reduction of 0.65 per cent compared to last year. This production was largely attributable to variable seasonal conditions in some major producing regions. Australia's dairy farmers continued to achieve productivity gains in 1989–90 through a combination of farm and herd management techniques. Average production per dairy cow has increased by 32 per cent to 3,768 litres per annum in 1989–90 compared to around 2,848 litres in 1979–80. The number of dairy farmers, however, continued to decline from 20,000 in the mid 1980's to under 16,000 presently.

Despite industry emphasis on improved yields the scope for increased milk production is constrained by the nature of the world market where subsidised competition by the EC severely restricts Australia's market opportunities.

Pasture based feed techniques allow operation of a large herd size by world standards. At 30 June 1989 the average number of milking cows per farm was estimated at around 110, (including cows in milk and dry, average dairy herd size was about 160 at 30 June 1989).

Production is destined for three separate markets: packaged fresh milk for direct consumption, manufacture of short shelf-life products for local markets and major dairy products for both local and export destinations. Output, however, varies markedly between States with Victoria the dominant supplier of milk for manufacturing purposes. This reflects Victoria's position as the major dairy State in Australia producing over 60 per cent of the nation's milk supply. In the other States, particularly New South Wales, a far larger emphasis of production is to meet consumer demand for fresh milk.

Fluid milk consumption accounts for around 27 per cent of total production. Of the remainder half was used in manufactured products for domestic consumption, with the balance, around 25 per cent, export dedicated. Exports, therefore, accounted for about 35 per cent of manufactured products in 1989–90.

Reflecting the growing rationalisation and sophistication of the industry 1989–90 witnessed the widespread introduction of compositional methods of payment for milk. These systems allow manufacturers to more clearly identify to farmers the value of milk components (fat and protein). Over time it is expected to encourage farmers to tailor breeding and management strategies more acutely to demand in consumer markets serviced by their respective manufacturer.

Domestic market

Average annual per capita milk consumption has stabilised at around 100 litres during the 1980s. Growth in total demand has, therefore, become tied to population increase. Substantial changes, however, have arisen in the types of milk consumed, with sales of fat reduced and modified milks maintaining their rapid increase in overall market share.

During the past year sales of both Australian and imported cheese varieties rose by an estimated 7.4 per cent and 4.7 per cent respectively. Total sales rose by 7.1 per cent to 164,432 tonnes. The growth was predominantly a result of the increase in cheddar sales. Imports, mainly of specialty cheese brands are equivalent to 12 per cent of total domestic cheese sales.

Total sales of butter have been relatively static in recent years but there has been a compositional change with a concerted growth in sales of lower fat, salt reduced blends. A major growth market has been short shelf life products. This highlights consumer preferences for healthier and more natural foods.

MILK CATTLE NUMBERS
('000)

		Cows and heifers used or intended for production of milk or cream for sale			
			Heifers		
31 March	*Bulls used or intended for service*	*Cows (in milk and dry)*	*1 year and over*	*Under 1 year*	*House cows and heifers(a)*
1984	46	1,809	483	401	66
1985	45	1,809	475	413	63
1986	43	1,770	488	397	61
1987	37	1,716	464	381	41
1988	36	1,676	455	375	38
1989	36	1,663	443	370	34

(a) One year and over, kept for the establishment's own milk supply.

International market

Australia is one of the two most efficient suppliers of high quality dairy products on the world market, and has a long history of involvement in international trade. In recent years Australia has accounted for between six per cent and seven per cent of world trade though producing around one per cent of total world milk supply. Policies employed, however, by EC and other northern hemisphere producers of heavily subsidised exports to dispose of domestic surpluses continue to distort the international trading sector, reducing returns to efficient Australian suppliers. Price cutting by East European countries also influenced market returns in the past year.

The total volume of Australia's export sales of 280,985 tonnes during 1989–90 was slightly below the preceding financial year's level. The export mix altered substantially, following a large rise in skim milk powder (SMP) sales. Exports of SMP and butter milk powder rose by 24 per cent to 91,639 tonnes. Total butter and butter oil sales of 48,977 tonnes were 6.6 per cent below the 1988–89 level. Cheese exports declined substantially by 24.4 per cent to 45,137 tonnes. Subsidised EC competition in the key Japanese market accounted for a large part of the decline. Trade was mainly concentrated in the Asian and Middle East regions with the earlier (including Japan) accounting for 60.5 per cent of the total value of dairy exports. The fob value of exports remained constant at A$650 million compared to the preceding year.

Returns per tonne to Australian exporters in 1989–90, however, were favourable compared to previous financial years as exporters took advantage of the relatively high prices in the first six months when negotiating contracts. The general improvement in exchange rate convertibility, viz the US dollar, assisted exporters in increasing Australian dollar revenues.

Government assistance

In light of the distortion of the world dairy market the Australian Government has used various schemes to support the local industry. The current Commonwealth dairy marketing arrangements, commonly known as the Kerin Plan, were introduced on 1 July 1986 with the basic objective of developing a more efficient and profitable dairy industry able to respond to changing market conditions.

A major feature of the current arrangements are export support payments, funded by a levy imposed on all milk production, including milk used in the liquid milk market. This levy (the All Milk Levy) is levied on the fat component of milk and may not exceed a ceiling of 45 cents per kilogram of milkfat (or less than two cents per litre of milk) in any production season. The rate for 1990–91 was set at 43 cents per kilo of milkfat.

The money collected from this levy is placed in the Market Support Fund and used to provide a support payment to all exported dairy products (including the dairy product components of manufactured foods such as cakes). The level of support varies between 22.35 per cent for butter and 19.95 per cent for skim milk powder of the estimated average export price in 1990–91. The Fund is administered on behalf of the local industry by the Australian Dairy Corporation.

The payment of Market Support raises Australian export returns above the prevailing international export price. This means that in order for domestic market sales to be as profitable as export sales, domestic sales prices must rise to the level where they are equal to the supported export return (i.e. world price plus Market Support). In this way the current marketing arrangements support local prices above the distorted international prices while still ensuring that local manufacturers' returns reflect international price trends.

Assistance to industry is also offered via the Rural Adjustment Scheme which provides financial assistance, for example, to farm build-up, farm improvement and household support. Government funding of dairy research is provided on a dollar for dollar matching basis with industry funded contributions. Producers at present (1990–91) pay a 1.8 cent levy per kilogram of milkfat for research and a corresponding 4.95 cents to a promotion fund.

The Research Levy is used to finance research into all aspects of dairy production and consumption. Under the current arrangements the Commonwealth Government contributes funds for dairy research equal to those raised from the Research Levy. The allocation of research funds is administered through the Dairy Research and Development Corporation.

Supported research covers three broad areas: farm, manufacturing productivity and marketing. Examples of more specific research include cheese making technology, pasture improvement, animal nutrition and economic modelling.

PRODUCTION, UTILISATION AND GROSS VALUE OF WHOLE MILK

	Whole milk intake by factories(a)			
Year	*Market milk sales by factories*	*Milk used in the manufacture of dairy products*	*Total intake*	*Gross value*
	—million litres—			$m
1983–84	1,572	4,351	5,923	1,153.2
1984–85	1,593	4,445	6,038	1,035.4
1985–86	1,625	4,412	6,038	1,106.7
1986–87	1,655	4,517	6,172	1,257.4
1987–88	1,667	4,462	6,129	1,390.9
1988–89	1,695	4,594	6,289	1,635.1

(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 the ABS.

Industry outlook

While there were some regional differences, 1989–90 was generally favourable in terms of the industry's financial performance. Farm gate prices were generally up compared to the previous year, as instanced by the 10 per cent rise in Victorian prices for manufacturing milk.

These higher returns were achieved despite a slide in export prices in the first half of 1990. Forward contracting early in the production year, i.e. spring of 1989, provided a buffer against this fall. Returns in 1990–91, however, are likely to fully reflect the change in the export market where recent increases in EC export subsidies and the continued determination of East European suppliers to dispose of product on the world market has weakened prices. Opening prices in Victoria, the main production State, were down by around 15 per cent on those of 1989–90. The implementation of Closer Economic Relations with New Zealand will add to the competitive pressures faced by the indigenous industry.

World minima prices for major dairy products, established under the GATT sanctioned International Dairy Agreement, are designed to place a floor under international dairy product prices. The minima are, however, coming under increasing pressure as the September review draws nearer because of supply imbalances on the world market.

On the international scene the conclusion of the Uruguay Round of multilateral trade negotiations in 1990 is unlikely to lead to a substantial reduction in barriers to agricultural trade. The main barrier is influential farmer interest groups in major trading blocs resisting substantive change to the current protectionist regimes. The OECD has estimated that international dairy prices have been lowered by 40 per cent by restrictive domestic and export trading policies of major producing and consuming countries, such as the EC.

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 are significant.

Exports of honey are regulated by the Australian Honey Board which also promotes honey consumption.

Statistics up to and including 1985–86 in the following table relate to apiarists with forty or more hives. In 1986–87 the Census scope was revised to include establishments undertaking agricultural activity having an estimated value of agricultural operations (EVAO) of $20,000 or more.

BEEKEEPING STATISTICS

Year	Number of apiarists	Number of beehives: Productive	Number of beehives: Total	Honey produced: Quantity	Honey produced: Average production per productive hive	Honey produced: Gross value	Beeswax produced: Quantity	Beeswax produced: Gross value
		'000	'000	'000 tonnes	kg	$'000	tonnes	$'000
1983–84	2,148	393	529	25.0	63.6	19,220	467	1,622
1984–85	2,222	413	553	28.0	67.7	21,257	528	2,077
1985–86	2,250	427	560	26.9	63.0	25,387	490	2,035
1986–87	760	293	364	19.2	65.6	31,000	334	1,988
1987–88	770	285	366	23.0	80.8	32,500	428	1,900
1988–89	836	307	405	22.6	73.8	29,600	530	2,000

Eggs and Egg Products

Commercial egg production in Australian States (including NT but excluding ACT) in 1988–89 was about 184.0 million dozen. The decrease in recent years is expected to 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.

Agricultural Improvements

Irrigation on agricultural establishments

Irrigation is one of the factors by which agriculture is 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 1.8 million hectares in 1986–87) forms 9.2 per cent of the total area under crops.

Chapter 16, Water Resources, contains additional details of water conservation and irrigation with international, national and interstate aspects.

Irrigation statistics are collected every three years in the Agricultural Census and represent area actually irrigated.

AREA IRRIGATED BY SOURCE OF WATER USED, YEAR ENDED 31 March 1987(a)
(Hectares)

	NSW	Vic.	Qld	SA	WA	Tas.	Aust.(b)
Surface water—							
From State irrigation schemes	403,852	423,414	69,255	13,103	12,091	2,449	924,164
From other schemes (including private group schemes)							
Direct from rivers, creeks, lakes, etc.	350,963	62,300	50,770	21,555	1,777	13,314	501,713
From farm dams	16,848	34,564	31,792	3,692	4,498	20,797	112,194
Total	367,811	96,864	82,562	25,247	6,275	34,111	613,907
Total surface water	*771,663*	*520,278*	*151,817*	*38,350*	*18,366*	*36,560*	*1,538,071*

For footnotes *see* end of table.

AREA IRRIGATED BY SOURCE OF WATER USED, YEAR ENDED 31 March 1987(a)—*continued*
(Hectares)

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*Aust.(b)*
Underground water supply (e.g. bore, spear, well)	57,722	26,027	122,997	52,238	5,473	1,476	266,507
Town or country reticulated water supply	732	4,096	546	1,177	130	128	6,942
Unspecified*(c)*	24,951	—	—	—	—	—	24,951
Total all water sources	**855,068**	**550,402**	**275,360**	**91,765**	**23,969**	**38,165**	**1,836,472**

(a) Data for irrigation collected every 3 years. *(b)* Also includes figures for the ACT and NT. *(c)* ABS imputed data to balance area irrigated and source of water questions due to incomplete reporting in the Agricultural Census.

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
1983–84	n.a.	2,481	414	721
1984–85	26,407	2,374	421	885
1985–86	25,089	2,160	408	869
1986–87	24,064	1,981	416	830
1987–88	26,651	2,454	431	953
1988–89	27,871	2,523	438	971

Since the World War II 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.

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 World War II 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.

The estimates in the table below are taken from the monthly labour force survey, and are not related to employment data collected at the annual Agricultural Census.

EMPLOYED PERSONS IN AGRICULTURE AND SERVICES TO AGRICULTURE ('000)

Month of August	*Males*	*Married females*	*All females*	*Persons*
1984	278.6	80.3	94.0	372.6
1985	287.5	90.3	107.7	395.3
1986*(a)*	278.6	94.8	112.8	391.4
1987	271.6	90.1	103.1	374.7
1988	284.0	97.5	118.7	402.7
1989	269.0	93.3	111.1	380.1

(a) From April 1986, the estimates of employed persons include persons who worked without pay between 1 and 14 hours per week in a family business or on a farm (i.e. unpaid family helpers).

Agricultural Research by CSIRO

Agricultural research conducted by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is directed primarily to aspects of agricultural production and processing that are of widespread significance and require mid-term 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. It is vertically integrated, covering all aspects from production through to post-harvest handling, storage and processing, and includes studies 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. Its agricultural research complements that of State government departments and universities, and the Organisation attaches considerable importance to collaborative research with them.

CSIRO's agricultural research 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; agricultural systems; irrigated agriculture; wool textiles and marketing; 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 performed within the Institute of Animal Production and Processing and the Institute of Plant Production and Processing and to a lesser extent the Institute of Natural Resources and Environment (rangelands, grazing, irrigated agriculture, plant/water bird interactions, and vertebrate pest control).

The Institute of Animal Production and Processing carries out scientific and technological research aimed at improving the efficiency of livestock production and processing 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, dairy foods, and fruit and vegetables; and wool textiles and marketing. This research is performed by the following constituent units of the Institute—the Divisions of Animal Health; Animal Production; Tropical Animal Production; Food Processing; Wool Technology; and the Australian Animal Health Laboratory. The Division of Human Nutrition also conducts research for the benefit of the Australian community.

Research in the Institute of Plant Production and Processing is directed to improving the profitability and stability of industries based on field crops, pastures, horticulture and forests, and to providing knowledge for the use and management of Australia's soils, plants and insects. Specific objectives are: to increase understanding of basic plant biological processes and their interactions with insects and soils; to increase the variety and quality of plant-based products to meet market needs; to develop more efficient production systems; to develop technologies to provide new opportunities for Australian industries; and to improve the community's understanding of Australia's plants, insects and soils. This research is performed in the following constituent Divisions of the Institute: Entomology; Forestry and Forest Products; Horticulture; Plant Industry; Tropical Crops and Pastures; and Soils.

The Institute of Industrial Technologies is also engaged in research of direct benefit to the agricultural industries through research on the design and synthesis of potential agricultural chemicals performed by the Division of Chemicals and Polymers.

The Institute of Information Science and Engineering assists the agriculture industry to improve its competitiveness through the use of advanced computer, communications and space systems. The Institute's current research embraces development of geographic information systems, image analysis, image processing and graphics for the analysis of land use and monitoring of agricultural production and land management; ultrasonic yield and quality measurement for the meat and livestock industry; and quality control in agricultural production and processing.

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14

FORESTRY AND FISHING

FORESTRY

Forests are an important sustainable national resource providing a wide range of indispensable products and benefits to the community.

The cover of forest vegetation protects the soil from water and wind erosion, reduces flooding and siltation of water storages and maintains the quality of water. Forests provide habitat for a variety of native animals and plants.

Native and plantation forests contribute substantially to the Australian economy, especially to employment in rural areas. Forests also represent valuable ecosystems for education, scientific research as well as places for tourism, recreation and other purposes. Not all forests are necessarily suitable for all types of uses at the same time, yet careful management will ensure that the forests provide multiple benefits in the long-term for the Australian community.

Forestry in the States and Territories

In the Commonwealth framework, State and Territory Governments are primarily responsible for land management. Each State has a forest authority responsible for the management and control of publicly-owned forests, in accordance with the Forestry Acts and Regulations of the State or Territory concerned.

Commonwealth forestry administration

The Department of Primary Industries and Energy is responsible for forestry matters at the national level. Its main responsibilities are providing advice to the Commonwealth Minister responsible for forestry matters; administration of export licensing responsibilities in relation to unprocessed timber; liaison with State, National and international organisations concerned with forestry; provision of a Secretariat for the Australian Forestry Council; and management of policy and program initiatives.

Existing forest estate

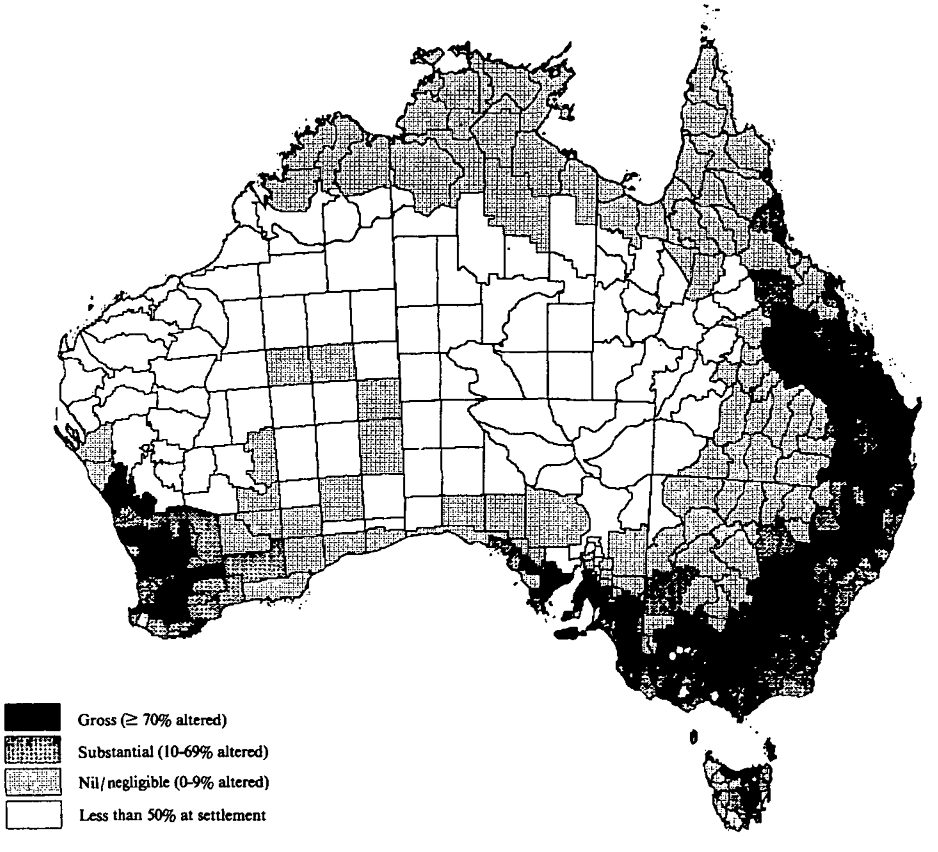
Native forest is defined as land dominated by trees with an existing or potential mature height of twenty metres or more, including native stands of cypress pine in commercial use regardless of height. The total area of native forest was estimated at 41 million hectares as at 30 June 1989.

The following map, produced by Commonwealth Scientific and Industrial Research Organisation (CSIRO) using the Australian Resources Information System (Cocks et al., 1987) shows the extent to which Australian natural forests and woodlands have been disturbed (usually meaning cleared) since European settlement.

For this map, forests and woodlands are defined as including:

- tree communities with at least 10 per cent projected foliage cover;
- tall (2 m) Eucalypt shrub communities with at least 10 per cent projected foliage cover (e.g. Mallee);
- mangroves.

DISTURBANCE TO AUSTRALIAN FORESTS AND WOODLANDS SINCE EUROPEAN SETTLEMENT



Sources:

Cocks, K.D., Walker, P.A. and Parvey, C.A. *Evolution of a Continental Scale Geographic Information System.* Submitted to the International Journal of Geographic Information Systems.

Wells, K.F., Wood, N.H. and Laut, P. (1984) *Loss of Forests and Woodlands in Australia: A Summary by State, Based on Rural Local Government Areas.* CSIRO Division of Water and Land Research Technical Memorandum 84/4.

Two factors, original vegetation and recent land cover, have been combined to estimate the changes to forests and woodlands since European settlement (Wells et al., 1984).

The percentages shown on this map are conservative, i.e. at *least* these percentages of the original forests and woodlands have been disturbed. Estimates of the percentage of forests and woodlands disturbed in each State are:

> New South Wales, 49%; Victoria, 68%; Queensland, 35%; South Australia, 40%; Western Australia, 31%; Tasmania, 36%; Northern Territory, 0%; Australian Capital Territory, 60%.

Of the 41 million hectares, 30 million hectares are in public ownership. The bulk of the 11 million hectares of private native forest are not actively managed for wood. Of 30 million hectares of public forests, 6.2 million hectares have national park status and 12.2 million hectares are Crown forests, vacant or occupied under lease on which wood harvesting is carried out under government control but are not reserved and actively managed for wood production.

Of the 11.6 million hectares of State forests, 0.8 million hectares are special reserves managed for other than wood production purposes and on 4.3 million hectares, wood harvesting is restricted partly because of management priorities for other values and partly due to present economic inaccessibility. This leaves 6.5 million hectares or about 16 per cent of a total 41 million hectares actively managed for wood production.

NATIVE FOREST AREAS: BY FOREST TYPE AND OWNERSHIP: BY STATE AT 30 JUNE 1989
(' 000 hectares)

Item	*NSW*	*Vic.*	*Qld*	*WA*	*SA(c)*	*Tas.*	*NT*	*ACT*	*Total*
CLASSIFIED BY FOREST TYPE GROUPS									
Forest type									
Rainforest	265	13	1,237	—	—	499	38	—	2,052
Eucalypt productivity Class I*(a)*	1,207	527	205	180	—	442	—	—	2,561
Eucalypt productivity Class II*(a)*	3,659	4,509	1,290	2,477	—	1,902	—	51	13,888
Eucalypt productivity Class III*(a)*	8,009	344	3,300	—	—	—	—	—	11,653
Tropical eucalypt and paperbark*(b)*	—	—	4,078	—	—	—	2,450	—	6,528
Cypress pine	1,819	7	1,686	—	—	—	778	—	4,290
Total	**14,959**	**5,400**	**11,796**	**2,657**	**—**	**2,843**	**3,266**	**51**	**40,972**
CLASSIFIED BY OWNERSHIP									
Ownership category									
Public	*9,762*	*4,795*	*10,304*	*2,159*	—	*2,177*	*839*	*51*	*30,087*
- Category 1	3,244	2,670	2,567	1,787	—	1,392	0	0	11,660
- Category 2	4,302	447	6,412	51	—	460	524	9	12,205
- Category 3	2,216	1,678	1,325	321	—	325	315	42	6,222
Private	5,197	605	1,492	498	—	666	2,427	—	10,885
Total	**14,959**	**5,400**	**11,796**	**2,657**	**—**	**2,843**	**3,266**	**51**	**40,972**

(a) Eucalypt forests are grouped into productivity classes in descending order of productivity. No specific indexes of productivity have been developed for these classes and there can be some overlap, especially between States, in the relative productivity levels used to assign particular forest types to productivity classes. *(b)* Includes tropical eucalypt and paperbark not in commercial use. *(c)* There is no data for S.A. as wooded areas do not fall into definition of native forests, i.e. do not have an existing height of twenty metres or more.

NOTE: Public 1: Forest land managed for multiple use including wood production. Public 2: Crown land either vacant or occupied under lease on which wood harvesting is carried out under government control but is not reserved and managed for that purpose. Public 3: Land on which wood production is excluded (National Parks etc.).

For more details on Australian native forests *see Year Book* No. 61.

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 1981 for the maintenance of the area of plantations established previously with Commonwealth funds.

Privately owned coniferous plantations amount to almost one-third the area under State ownership. New coniferous plantations (including replanting) are currently being established at the rate of 35,000 hectares per annum. A detailed account of the history and development of coniferous plantations and of the characteristics of individual species is included in *Year Book* No. 59.

Hardwood plantations are receiving increasing attention as a means of providing a secure resource base for the industry.

The Commonwealth has taken action to encourage native hardwood plantations through the establishment of the National Afforestation Program (NAP) in 1987–88, with funding of $15 million over three years, to assist in the establishment of native hardwood plantations. NAP projects have created over 10,000 hectares of new eucalypt forests, and led to a doubling in the rate of planting prior to the NAP.

An increased interest in the establishment of eucalypt plantations is evident, particularly in Tasmania. The current annual rate of such plantations is about 8,500 hectares. The following table shows total area of plantations in Australia classified by species.

PLANTATION AREAS CLASSIFIED BY SPECIES, 31 MARCH 1989
(hectares)

Species group	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
PINE AND PRIVATE OWNERSHIP									
Coniferous—									
Pinus radiata	232,358	203,021	3,221	54,573	92,225	70,253	—	14,047	669,698
Pinus elliottii	n.a.	—	85,340*(c)*	290*(e)*	—	—	—	—	85,630
Pinus pinaster	n.a.	919	—	28,714	3,169	—	—	—	32,802
Pinus caribaea	n.a.	—	48,276	—	—	—	2,386	—	50,662
Araucaria	1,582	—	45,045	—	—	—	—	—	46,627
Other	14,269	3,158	7,062	631	368	334	1,801	514	28,137
Total	*248,209*	*207,098*	*188,944*	*84,208*	*95,762*	*70,587*	*4,187*	*14,561*	*913,556*
Broadleaved—									
Eucalptus spp.	1,229	15,589	1,573*(d)*	13,491	1,340	21,965	—	—	55,187
Populus spp.	1,757	220	—	—	—	—	—	—	1,977
Other	38	39	200	—	—	2,696	—	—	2,973
Total	*3,024*	*15,848*	*1,773*	*13,491*	*1,340*	*24,661*	—	—	*60,137*
Total	**251,233**	**222,946**	**190,717**	**97,699**	**97,102**	**95,248**	**4,187**	**14,561**	**973,693**

(a) Native broadleaved plantations on public land are not identified separately from native forest areas. Other coniferous includes pinus elliottii, P. pinaster, P. caribaea. *(b)* Since 31 March 1986, plantations on aboriginal land have been transferred to private ownership and publicly owned plantations are no longer managed for wood production. *(c)* Includes APM resource, which is being liquidated. *(d)* Includes all hardwood species. *(e)* Includes Pinus caribaea.

Source: State and Territory forest services.

Australian Forestry Council

The Commonwealth Government and the State Governments formed the Australian Forestry Council in 1964 to coordinate the development of the nation's forest resource in the general interest of the community. Membership of the Council comprises the State and Northern Territory Ministers responsible for forestry and the Commonwealth Minister for Primary Industries and Energy. The New Zealand Minister for Forestry has observer status on Council. The Council is serviced by a Standing Committee and specialist subcommittees.

The Australian Forestry Council's current terms of reference are to:

- promote the management of Australian forests for the benefit of the people of Australia;
- advance the welfare and development of the industries based upon these forests;
- facilitate the exchange of information between parties interested in all the uses and the protection of the forests;
- facilitate consultation and coordination between the Commonwealth, State and Territory Governments on forestry matters, especially matters having interstate or national implications;
- formulate and recommend national forest policy for Australia;
- coordinate research into all aspects of forestry including the uses of forests and forest products; and
- consider matters submitted to the Council by its Standing Committee.

The Council's National Forests Strategy, which outlines important basic principles and goals associated with the management of Australia's forests as well as providing a framework for the general development of programs and ongoing administration, was tabled in Federal Parliament in November 1986.

Commonwealth Government Initiatives

The Government has indicated a commitment to securing the future of both the forests and the forests industry and to achieve this objective has taken a number of initiatives. In 1989 it established the One Billion Trees program, with funding of $4 million, to help protect and enhance Australia's native tree and vegetation cover.

One Billion Trees

By the year 2000 the Government hopes to have a billion more trees around Australia planted and growing. This will entail:

- a Community Tree Planting Program to plant over 400 million trees; and
- a Natural Regeneration and Direct Seeding Program to establish over 600 million trees in open areas of Australia.

Greening Australia, a non-profit community organisation, administers the National Tree Program.

National Forests Inventory

In November 1988, the Prime Minister announced a series of new principles and processes to assist with a more harmonious resolution of the competing demands on Australia's natural resources. One of the Commonwealth Government's initiatives was the establishment of the National Forest Inventory (NFI).

The NFI is being compiled in the form of a geographic information system through the National Resource Information Centre by the NFI project team of the Bureau of Rural

Resources in Canberra. The project is being undertaken in full consultation with State and Territory Governments and will receive funding of $2.9 million over the next three years.

The NFI will assist in informed decision making by:

- identifying and describing forest communities and their current conservation status; and
- providing the basic wood production resource information to enable the planning of efficient sustainable forest utilisation.

Research

Commonwealth Scientific and Industrial Research Organisation—CSIRO

CSIRO research on forests is mainly undertaken in the Division of Forestry and Forest Products which was formed on 1 January 1988, integrating research on land use and the production and processing of wood. The research is of two main types: longer-term strategic research that will help shape the future of the industry, and collaborative and contract research with individual companies and States.

The Division of Forestry and Forest Products is a constituent part of the Institute of Plant Production and Processing. The primary role of the Division is to conduct research and development in production forestry and forest products, taking full account of economic and environmental factors as an integral part of its work.

Objective

To benefit Australia by sustaining forests, improving yields and increasing the quality and value of forest products.

Strategy

The Division works closely with forest growers and forest-based industries in conducting research, primarily in Australia, to develop:

- improved tree-breeding, silviculture and forest management;
- improved techniques for the control of fire and biological damage to forests;
- increased profitability through efficient use of wood resources and technologies for new products and processes; and
- environmentally improved practices and processes.

The Division has its Headquarters at Clayton, Melbourne with research centres at Canberra, Hobart, Brisbane, Perth, Mount Gambier, Ridgely (Tasmania), Aspendale and Highett in Melbourne. Work is organised in six programs and is frequently undertaken in collaboration with State forest services, private companies or universities.

Australian Bureau of Agricultural and Resource Economics—ABARE

ABARE research is aimed at enhancing the efficiency of forest based industries through analysis of the institutional framework, policies and practices, and the evaluation of alternative arrangements.

Research findings are disseminated at the annual National Agricultural and Resources Outlook Conference and in the *Agricultural and Resources Quarterly,* Discussion Papers and Submission to Inquiries by, for example, the Industry Commission and the Resource Assessment Commission.

Education

The Australian National University and the University of Melbourne offer undergraduate courses leading to a Bachelor of Science degree in Forestry and a Bachelor of Forest

Science respectively. Both universities also offer postgraduate courses leading to Master and Doctor of Philosophy degrees. In addition, most States provide for sub-professional forestry training.

The Department of Primary Industries and Energy makes available postgraduate awards for full-time research, leading to the degree of Master and/or Ph.D at an Australian university. The Department also administers an award funded from a private bequest for postgraduate study at Oxford University for one year which is awarded every two to three years.

Timber and Timber Products

The selected details shown below have been compiled from the census of manufacturing establishments.

The woodchip export industry uses timber which is unsuitable for sawmilling and is not required by the Australian pulp, paper and reconstituted board industries. Before the advent of the woodchip export industry much of this material was left standing in the forest after logging, where it inhibited regeneration. After several cycles of selective logging since European settlement, many forests contained large volumes of over-mature and defective timber for which there was no market. The woodchip export industry, by making it economic to remove this poor quality timber, has enabled degraded forests to be regenerated into faster growing, more productive ones. Considerable quantities of sawmill waste material, which would otherwise be burnt, are also chipped for local pulpwood-using industries and for export.

MANUFACTURING ESTABLISHMENTS(a)—SUMMARY OF OPERATIONS, 1987–88

1983 ASIC(b) code	*Industry description*	*Establish-ments at 30 June*	*Employment at 30 June(c)*	*Wages and salaries(d)*	*Turnover*
		No.	'000	$m	$m
2531	Log sawmilling	604	11.3	201.3	820.0
2533	Veneers and manufactured boards of wood	72	5.3	125.7	763.1
2537	Hardwood wood chips	12	0.8	26.0	329.8

(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)* Includes working proprietors. *(d)* Excludes the drawings of working proprietors.

TIMBER AND SELECTED TIMBER PRODUCTS(a)

Item		*1985–86*	*1986–87*	*1987–88(b)*	*1988–89(b)*
Undressed sawn timber—					
Recovered from sawn logs—					
Australian grown—					
Broadleaved	'000 cu m	n.a.	2,009	n.a.	n.a.
Coniferous	"	n.a.	1,056	n.a.	n.a.
Total	"	**n.a.**	**3,065**	**n.a.**	**n.a.**
Woodchips (green weight)—					
Hardwood (broad leaved)	'000 tonnes	n.a.	5,287	n.a.	n.a.
Plywood—					
Commercial – (surface measure)	'000 sq m	n.a.	6,706	n.a.	n.a.
(1 mm basis)	"	n.a.	69,542	n.a.	n.a.
Waterproof – (surface measure)	"	n.a.	1,171	n.a.	n.a.
(1 mm basis)	"	n.a.	12,132	n.a.	n.a.
Particle board (resin bonded)	'000 cu m	731	705	728	n.a.
Wood pulp—					
Mechanical	"	361,356	373,789	414,297	438,775
Other	"	516,892	534,629	580,192	597,160

For footnotes *see* end of table.

TIMBER AND SELECTED TIMBER PRODUCTS(a)—*continued*

Item		*1985–86*	*1986–87*	*1987–88(b)*	*1988–89(b)*
Paper—					
Newsprint	tonne	362,954	386,320	401,066	401,269
Printing	"	172,539	184,504	194,191	n.a.
Tissue and sanitary papers	"	125,592	133,402	n.p.	n.p.
Wrapping (incl. kraft)	"	338,220	362,439	n.p.	n.a.
Writing and duplicating*(c)*	"	82,495	77,756	72,588	n.a.
Other paper (incl. blotting)	"	40,886	65,067	n.p.	n.a.
Paperboard (incl. strawboard)	"	472,609	497,425	557,249	n.a.

(a) Excludes production of small single establishment enterprises with fewer than four persons employed and establishments engaged in non-manufacturing activities but which may carry on, in a minor way, some manufacturing. *(b)* Not available as figures not collected by census that year. *(c)* Includes cartridge.

FISHING

Source and basis of statistics

Statistics presented in this section are obtained from the Australian Bureau of Agricultural and Resource Economics (ABARE) and the Australian Fisheries Service, Department of Primary Industries and Energy. The Australian Bureau of Statistics (ABS) has reduced its involvement in the collection of fisheries statistics. The ABS no longer publishes statistics on the Australian fishing 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 animal.

Fisheries Resources and their Commercial Exploitation

Over 3,000 species of marine and freshwater fish occur in and around Australia and at least an equal number of crustacean and mollusc species. Despite this, less than 100 of these are commercially exploited. Australia's major commercially exploited species are prawns, rock lobster, abalone, tuna, other fin fish, scallops, oysters and pearls. Australian fishing operators concentrate their efforts on estuarine, coastal, pelagic (surface) species and demersal (bottom living) species that occur on the continental shelf.

Fin fish

For a detailed account of Australia's commercial exploitation of fin fish see *Year Book* No. 73.

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 largest prawn fishery, the northern prawn fishery, is located in northern Australia from Cape York (Queensland) to Cape Londonderry (Western Australia). 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. Deep water fisheries are developing off the north-west shelf for prawns, scampi and lobsters, and off Western Australia where prawns, scampi, lobsters, crabs, squid and fin fish are taken. 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. Tropical rock lobsters are taken in the Torres Strait fishery along with prawns and fin fish.

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, Victoria, and South Australia has proven successful. Production is planned to increase significantly and presently accounts for over 12 per cent of total oyster production. Following a serious decline in catches in the scallop (*Pecten meridionalis*) fishery based on stocks in Port Phillip Bay in Victoria, new offshore beds were located in southern New South Wales, eastern Victoria, northern Tasmania and south-west Western Australia. However, substantial fluctuations in abundance have resulted in erratic production from year to year. Fisheries based on the saucer scallop (*Amusium balloti*) are centred on Hervey Bay, Queensland and in Shark Bay, Western Australia. An important abalone (*Haliotus* spp.) fishery exists 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 Western Australia. Mussels (*Mytilus planulatus*) are harvested in Victoria, Western Australia and New South Wales. 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 pearl oyster (*Pinctada maxima*) is harvested from various localities in the tropical waters of Australia between Broome in Western Australia and Cairns in Queensland. The oyster is used primarily for the production of cultured pearls, but some shell is used for mother-of-pearl production. Trochus shell is found mainly on coral reefs off the Queensland coast, in the Torres Strait and on the coasts and islands of north western Australia.

Aquaculture

Australia has enjoyed a relatively long history of success in the farming of the Sydney rock oyster. Pearl culture operations and goldfish farming are well established. The production of juveniles of several species of fin fish, molluscs and crustaceans has been undertaken for some years, initially for restocking wild populations and subsequently for grow-out operations. As in many other developed countries, there has been a surge of interest and investment in many types of aquatic farms over the last decade. Notable successes are the salmonid industry in Tasmania, consisting of about 25 farms, and commercial cultivation of the Pacific oyster, blue mussel and rainbow trout.

Developmental work is active in a number of areas such as barramundi, freshwater crayfish (yabbies and marron), prawns, mussels and algae. Research is continuing into the hatchery rearing of species such as abalone, scallops, giant clams, flat and pearl oysters.

Whales

Whales are now a protected species in the Australian Fishing Zone (AFZ).

Foreign fishing

Establishment of the 200 nautical mile AFZ in 1979 covering a total of 8.9 million square kilometres, brought portions of oceanic tuna stocks, and demersal and pelagic fish stocks previously exploited by foreign fishing vessels, under Australian control.

Australia has an international obligation under the Law of the Sea Convention, to allow foreign nations access to resources within the Australian Fishing Zone, that are surplus to domestic fisheries requirements and where such access does not conflict with Australian management and development objectives.

Licensed vessels from Japan, Thailand, Taiwan and Norway are currently permitted to operate in Australian waters either under bilateral agreements or joint venture arrangements with foreign Governments or fishing companies/organisations.

Foreign fishing operations by Taiwan and Thai interests in the demersal trawl fishery off the north and north-west coast take a wide range of tropical demersal fish species, including threadfin bream (*Nemipteridae*), tropical snappers (*Lutjanidae*), emperors (*Lethrinidae*), goatfish (*Mullidae*) and hair tails (*Trichuiridae*). Following the introduction of controls on the length of gillnets which can be used, foreign pelagic gillnet operations have ceased. Japan is permitted, under agreement, to long line, principally for tunas, off certain areas of Australia. Four Norwegian freezer trawlers currently operate in deeper waters of the AFZ under joint venture arrangements with Australian companies.

In February 1990 the Governments of Australia and the Soviet Union signed a fisheries cooperation agreement which provides a framework with which feasibility fishing might take place under a subsidiary agreement. The agreement also establishes principles under which port access by Soviet trawlers for repairs, revictualling, refuelling and landing of catch might be authorised.

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 inland waters. These laws require the licensing of persons and boats in the commercial fisheries and provide a range of other regulatory powers.

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 external territories excluding the territorial sea of another country, and by foreign boats in the 200 nautical mile AFZ. The AFZ extends 200 nautical miles seaward of the territorial sea baseline of Australia and the external Territories but does not include waters adjacent to Australia's Antarctic Territory or waters exempted from the AFZ by proclamation under section 7A of the Act.

Australia has made maritime delimitation agreements with Indonesia, Papua New Guinea, the Solomon Islands and France. Australia has yet to make a marine delimitation with New Zealand. There are proclamations in force under section 7A of the Act for all overlappings of the AFZ with neighbours' exclusive fishing zones, whether or not Australia has made a delimitation agreement with the country concerned.

This Act requires the holding of licences and empowers the Minister to prohibit fishing activities as necessary for the conservation of resources and the management of the fisheries. The Fisheries Act authorises the publication of management plans having the force of law in relation to particular fisheries.

For a detailed account of the following Acts: *Continental Shelf (Living Natural Resources) Act 1968; Torres Strait Fisheries Act 1984; Foreign Fishing Boats Levy Act 1981; Fisheries Agreements (Payments) Act 1981* and *Fisheries Levy Act 1984* refer to *Year Book* No. 73.

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 Parliament and all State and Northern Territory Parliaments have enacted amendments to fishery laws for the purpose of implementing the fisheries elements of the Offshore Constitutional Settlement (OCS) 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.

OCS arrangements are now in force between the Commonwealth and the Northern Territory and all States except New South Wales. OCS arrangements simply rationalise jurisdiction and do not specify new rules for management of the fisheries concerned.

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 AFZ 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.

Formal management arrangements have been implemented or are being developed for all Australian fisheries which are now under Commonwealth control. The aim is to conserve the resource while promoting development and improving the economic performance of the industry. Special emphasis is being placed on the development of Australia's under-utilised species and the discovery of new resources. The Government has encouraged the fishing industry to participate more fully in fisheries management. Extensive consultations between government officials, scientific agencies, industry associations and recreational fishermen have become strong features of the decision making process.

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 sustainable 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.

The Fisheries Development Trust Account (established under the *Fishing Industry Act 1956*) and the Fishing Industry Research and Development Trust Fund (established under the *Fishing Industry Research and Development Act 1987*) 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 funded by annual Commonwealth appropriation. The latter is a matching fund into which is paid each year an appropriation from Commonwealth Government Revenue. Total Commonwealth funds are linked to amounts collected from the fishing industry by the State Fisheries Authorities and paid into appropriate State research accounts for the same purpose.

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, Tasmania, and regional laboratories in Western Australia and Queensland (fisheries science);

(ii) CSIRO Division of Oceanography, which has its headquarters and laboratory at Hobart, Tasmania;

(iii) CSIRO Division of Food Research, conducts research into handling, storage, processing and transportation of fish at its laboratory in Hobart, Tasmania;

(iv) The Australian Fisheries Service, Department of Primary Industries and Energy, Canberra;

(v) Bureau of Rural Resources, Department of Primary Industries and Energy, Canberra;

(vi) Australian Bureau of Agricultural and Resource Economics, Department of Primary Industries and Energy, Canberra;

(vii) State fisheries departments. Research vessels are operated by New South Wales, Victoria, Queensland, Western Australia, South Australia and Tasmania;

(viii) Great Barrier Reef Marine Park Authority (GBRMPA) located in Townsville and Canberra;

(ix) universities; and

(x) private fishing companies (surveys of fisheries resources, research into handling, processing and marketing).

Boats and Equipment Used in Fisheries

Fish, crustaceans and molluscs

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, gillnet; *shark (edible)*—long-lines, gillnet; *Australian salmon*—beach seine; *snoek*—trolling lines; *flathead*—Danish seine, otter trawl; *snapper*—long-lines, traps, gillnet, handline; *morwong*—Danish seine, otter trawl, traps; *whiting*—handline, otter trawl, Danish seine, beach seine, gillnet; *garfish*—beach seine; *Spanish mackerel*—trolling lines; *tuna*—pole and live-bait, purse seine, trolling lines, longlines (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; *pilchards, anchovies, jack mackerel and stripped tuna*—purse seine; *pearl shell oysters*—diving; *squid*—jigging, otter trawl; *crabs*—traps, otter trawl; *barramundi*—gillnet; and *orange roughy*—otter trawl.

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 the Australian commercial fishing industry. As the value of materials used in the course of production is not available, 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.

FISHERIES: GROSS VALUE OF PRODUCTION
($ million)

Period	*Value*	*Period*	*Value*
1971–72	86	*(a)*1980–81	330
1972–73	93	*(a)*1981–82	344
1973–74	100	*(a)*1982–83	423
1974–75	100	*(a)*1983–84	449
1975–76	135	*(a)*1984–85	524
1976–77	194	*(a)*1985–86	635
1977–78	218	*(a)*1986–87	777
1978–79	265	*(a)*1987–88	954
1979–80	299	*(a)*1988–89	811

(a) Estimates provided by the Australian Bureau of Agricultural and Resource Economics and the Australian Fisheries Service.
NOTE: Figures exclude non-edible production, but may include the value of production of fishmeat and petfood.

SELECTED MAJOR FISHERIES CATEGORIES: GROSS VALUE
($ million)

	1986–87	*1987–88*	*1988–89*
Prawns	216	246	170
Rock lobster	186	252	195
Tuna	37	41	48
Shark	15	20	20
Other fin fish*(a)*	122	137	124
Fish n.e.i.*(b)*	8	8	4
Abalone	84	96	87
Scallops	25	20	13
Oysters	31	38	43
Other*(c)*	53	96	107
Total	**777**	**954**	**811**

(a) For human consumption. *(b)* Not for human consumption. *(c)* Other aquaculture.

Processing of fish, crustaceans and molluscs

There is very little value added processing of fish products in Australia. Processing establishments vary in size, scope of operations and sophistication of technologies employed. The majority of establishments undertake only the most basic cleaning, filleting, packing and freezing processes, but others have the capacity for significant product transformation.

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.

For more information on processing of fish refer to *Year Book* No. 73.

Marketing of fisheries' products

Exports of fisheries products comes under Commonwealth jurisdiction, while domestic market activity comes under that of the corresponding State or Territory.

Although a substantial proportion of the Australian salmon, and to a lesser extent tuna catches are canned, the greater part of Australian fish production is marketed fresh-chilled.

A high proportion of Australian seafood production is exported and domestic prices increasingly reflect the conditions on export markets. The Australian industry exports 40 per cent of total fish production, but depends on export markets for over 70 per cent of its revenue. The Australian fisheries export industry depends on a limited range of products sold on a few major markets, with Japan and the United States accounting for about 75 per cent of the value of our exports.

AUSTRALIAN EXPORTS OF FISH BY PRODUCT TYPE AND DESTINATION*(a)*

Product and Destination	*Unit*	*1984–1985*	*1985–1986*	*1986–1987*	*1987–1988*	*1988–1989p*
Value						
Whole	$m	5.2	13.3	18.1	14.4	13.8
Japan	$m	2.1	7.9	10.7	8.2	7.8
Taiwan	$m	0.6	1.2	0.6	0.6	2.4
Saudi Arabia	$m	0.7	1.0	0.7	0.6	0.4
Germany, FR	$m	0.7	1.0	1.7	1.0	1.4
Thailand	$m	0.1	1.0	1.7	0.9	0.5
Other	$m	1.0	1.1	2.7	3.1	1.3
Fillets	$m	1.1	1.6	11.8	14.8	17.2
Japan	$m	0.8	1.1	3.3	5.3	6.3
United States	$m	0	0.3	7.7	8.3	9.7
Other	$m	0.3	0.2	0.8	1.2	1.2
Smoked, dried or salted	$m	—	0.1	0.2	0.8	0.9
Canned	$m	0.3	0.8	0.4	0.5	0.5
Other	$m	0.4	0.5	2.6	2.8	1.4
Taiwan	$m	0.1	0.3	0.5	1.3	0.2
New Zealand	$m	0.1	0	0.3	0.3	0.2
Other	$m	0.2	0.2	1.8	1.2	1.1
Total	**$m**	**7.0**	**16.2**	**32.8**	**33.2**	**33.8**

(a) Excludes tuna.

Australian fisheries supply domestic markets with fresh and frozen table fish, but do not produce sufficient to meet demand. Over 60 per cent of seafood consumed in Australia is imported, mostly in the form of fresh, chilled or frozen fish. Prawns and canned fish also are significant imported items.

AUSTRALIAN IMPORTS OF FISH BY PRODUCT TYPE AND SOURCE

Product and Source	*Unit*	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89p*
Quantity(*a*)						
Fresh, chilled or frozen	kt	41.0	37.4	39.3	41.5	35.2
Whole	kt	14.1	12.3	14.1	13.2	19.2
New Zealand	kt	4.6	4.8	3.6	4.1	4.9
Fillets	kt	26.9	25.1	25.2	28.2	16.0
New Zealand	kt	7.9	6.9	3.8	3.3	3.9
South Africa	kt	7.6	8.2	10.0	0	0
Smoked dried or salted	kt	4.6	4.5	4.0	5.2	2.4
Smoked	kt	3.8	3.4	2.9	2.2	1.3
South Africa	kt	2.9	2.2	1.5	0	0
Dried or salted	kt	0.8	1.1	1.1	3.0	1.1
Canned	kt	15.4	15.6	17.2	16.1	21.2
United States	kt	5.0	4.4	3.4	2.9	2.7
Canada	kt	9.5	8.7	6.9	4.1	4.8
Other						
Fishballs, cakes and sausages	kt	2.2	2.2	1.8	1.5	2.0
Japan	kt	1.5	1.4	1.0	0.8	1.0
Other	kt	7.3	6.5	5.1	2.6	2.9
Value						
Fresh, chilled or frozen	$m	111.1	118.8	132.7	124.7	95.2
Whole	$m	20.3	20.4	26.1	26.4	35.7
New Zealand	$m	10.0	12.7	10.1	13.1	14.3
Fillets	$m	70.4	75.3	84.1	97.8	59.5
New Zealand	$m	25.8	25.8	16.0	16.5	18.9
South Africa	$m	15.9	18.3	26.1	0	0
Smoked, dried or salted	$m	14.7	17.0	19.7	21.0	16.6
Smoked	$m	11.7	12.4	14.1	14.7	10.8
South Africa	$m	5.6	4.0	3.7	0	0
Dried or salted	$m	14.7	17.0	19.7	21.0	16.6
Canned	$m	64.3	74.6	90.4	86.0	119.4
United States	$m	26.2	25.6	19.9	23.1	26.8
Canada	$m	14.1	22.9	36.2	21.9	39.2
Other	$m	24.1	27.2	27.2	18.8	20.4
Fishballs, cakes and sausages	$m	5.6	7.1	7.6	5.9	6.7
Japan	$m	4.6	5.2	5.0	3.7	3.9
Other	$m	18.5	20.1	19.6	13.0	13.7
Total	**$m**	**193.9**	**214.5**	**248.1**	**263.0**	**265.3**

(*a*) Product weight.

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PRIMARY INDUSTRIES AND ENERGY, DEPARTMENT OF, AUSTRALIAN FISHERIES SERVICE *Australian Fisheries*

15

MINERAL INDUSTRY

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 and Mesozoic rocks of eastern Australia.

Economic geology

Minerals of economic significance occur throughout Australia, their geological age ranging from Precambrian to Recent. Many of the large deposits such as those at Broken Hill (New South Wales), Mount Isa (Queensland), Olympic Dam (South Australia) and the Kalgoorlie and Pilbara regions of Western Australia and the Alligator Rivers area of the Northern Territory are Precambrian in age. In eastern Australia the major deposits such as the Elura, Cobar, Woodlawn, Hellyer and Rosebery base-metal deposits, the Renison (Tasmania) tin deposit, and most of the gold and black coal deposits, are Palaeozoic in age. The black coals of the Moreton district of Queensland, north-east New South Wales and Leigh Creek, South Australia are of Mesozoic age. Deposits formed in Tertiary times include the brown coal in Victoria, the oil shales of eastern Queensland, the bauxites of Weipa (Queensland), Gove (Northern Territory) and the Darling Range (Western Australia) and the nickeliferous laterites at Greenvale (Queensland).

Mineral resources

Australia is self-sufficient in most minerals of economic importance (and much more than self-sufficient in some). Major minerals with known reserves adequate for domestic demand and exports include bauxite (aluminium), black coal, clays, copper, diamonds, gold, iron ore, lead, manganese, mineral sands (titanium and zirconium), natural gas, nickel, salt, silver, uranium and zinc.

A special article on the development of Australia's mineral industry is included at the end of Chapter 15 of *Year Book* No. 71, pages 592–598. For further details of principal Australian mineral deposits, and notes on principal mineral resources, *see Year Book* No. 61, pages 925–932.

Administration

Mineral rights in Australia are held by the State and Territory Governments and the granting of exploration and development titles is administered by them under the respective

State or Territory legislation. The Commonwealth Government holds rights to minerals in Commonwealth Territories and to certain prescribed substances in the Northern Territory, within the meaning of the Atomic Energy Act (principally uranium). The Commonwealth Government is also able to influence overall development and production activity in the mineral industry by virtue of its constitutional powers with respect to international trade, customs and excise, taxation and foreign investment. Certain specially-formed bodies such as the Joint Coal Board have been given administrative responsibility in defined areas. The Government has also established consultative mechanisms, such as the Australian Coal Marketing and Technology Council, to provide an advisory, rather than administrative, role.

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 and 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 largescale 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 of the seabed on the landward side of the outer limit of the 3 nautical 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 came into force on 1 February 1990. Pending enactment of similar legislation by the State's, offshore mining within the outer limit of the territorial sea is administered under the onshore mining legislation of the State's and the Northern Territory.

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, full control of petroleum mining rights is vested with the relevant State or Territory Government. Any organisation or individual proposing to undertake petroleum exploration or development must first satisfy the relevant Government that it has access to the necessary financial and technical resources to undertake the proposed operations.

Three main types of petroleum title are available:

(i) the exploration title, where the holders are typically given exclusive rights over an area to explore for petroleum by conducting surveys and drilling wells etc;

(ii) the production title, which is required for commercial production of petroleum and gives the holder the right to produce and sell the petroleum, is granted subject to the payment of a royalty; and

(iii) retention leases are available in the Northern Territory under the *Petroleum Act 1984* which provide security of tenure over sub-economic discoveries.

Royalty arrangements vary from State to State. Most onshore royalties are determined as a percentage of the well-head value of all petroleum production.

Commonwealth legislation provides for the replacement of all Commonwealth excise on liquefied petroleum gas and crude oil, and State/Territory royalty, with a Resource Rent Royalty (RRR) where the relevant State or Territory Government has negotiated an acceptable agreement with the producers and has agreed upon a revenue sharing formula with the Commonwealth. A RRR applies to the Barrow Island oilfield in Western Australia.

Offshore

As part of the Offshore Constitutional Settlement (OCS) between the Commonwealth and the States, responsibility for administering petroleum exploration and development within the outer boundary of the three nautical mile territorial sea rests with the relevant State or Territory while the Commonwealth has responsibility for the continental shelf beyond the territorial sea. Under the OCS, the States/Northern Territory and the Commonwealth agreed to a common petroleum mining code.

The Commonwealth legislation, the *Petroleum (Submerged Lands) Act 1967* provides for a Joint Authority for the adjacent area (beyond the territorial sea) of each State and the Northern Territory consisting of the relevant Commonwealth and the State/Territory 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 prevails. Day-to-day administration is the responsibility of the State or Territory Minister as the Designated Authority.

The offshore legislation provides for:

(i) exploration permits, providing exclusive exploration rights over a specific area;

(ii) production licences to authorise development and commercial production from discovered fields; and

(iii) retention leases to allow security of tenure over sub-economic discoveries.

Secondary taxation arrangements vary. In the major production areas of Bass Strait (crude oil/natural gas) and the North West Shelf (natural gas/condensate), a royalty, as well as an excise on crude oil production, is levied on all petroleum production. The Commonwealth shares royalty receipts with the States/Northern Territory under the OCS.

All other offshore projects ('greenfield' projects which had not received a production licence by 1 July 1984) are subject to petroleum Resource Rent Tax, in accordance with legislation introduced by the Commonwealth in 1987.

In order to encourage offshore petroleum exploration, the Commonwealth recently announced a coordinated strategy involving the regular release of exploration acreage, improved collection and dissemination of exploration data to explorers and enhanced company awareness about Australia's title acquisition and taxation agreements. A major feature of the strategy is that explorers are given advance notice of future releases of exploration acreage.

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 the 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)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	1988–89
New South Wales*(a)*	109,789	109,194	118,569	135,486	97,166	99,387
Victoria*(b)(c)*	180,585	206,086	213,292	157,991	156,799	109,035
Queensland*(a)*	107,579	142,533	196,110	176,451	196,013	178,301
South Australia	14,172	27,739	58,352	33,592	36,011	34,914
Western Australia	*(d)*168,477	131,640	162,208	154,056	162,648	171,972
Tasmania	2,137	1,043	1,507	1,641	3,048	3,800
Northern Territory	3,963	5,483	8,079	7,186	10,642	9,514
Commonwealth Government*(c)*	103,412	114,299	187,061	119,806	132,346	75,100
Total	**690,114**	**738,017**	**945,178**	**786,210**	**794,673**	682,023

(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)* Includes prepaid royalty of $50 million in respect of diamond royalty agreement.

Government Assistance

The Commonwealth Government and the various State Governments provide assistance to the mineral industry in a variety of ways. These were described in detail in *Year Book* No. 73.

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 22, Science and Technology.

Amdel Limited

Analysis, contract research and consulting in a broad range of scientific and technical areas is carried out by Amdel Limited and its subsidiaries. Operations are based in Adelaide, with branches in Perth, Melbourne, Sydney, Darwin and Townsville. Extensive laboratory facilities are available in the fields of analytical chemistry, mineralogy, metallurgy, materials science and petroleum. Mineral process evaluation is carried out at bench and Pilot Plant scale. Services are provided in fields of pollution and environmental control and occupational health and safety. Products are based around nucleonic measurement techniques linked to microprocessors, and include in-stream analysis for the mineral industry, coal slurry analyser, limestone analyser and on-pipe density gauge.

Commonwealth Scientific and Industrial Research Organisation—CSIRO

Minerals research by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is undertaken within the Institute of Minerals, Energy and Construction. The objective of the Institute is to increase the international competitiveness, export earnings, gross domestic product and value of services provided by the minerals, energy and construction industries.

Divisions (and their respective headquarters locations) of the Institute engaged in minerals energy and construction research are the Division of Geomechanics at Syndal (Vic.); the Division of Coal Technology at North Ryde (NSW); the Division of Mineral Products at Port Melbourne (Vic.); the Division of Mineral and Process Engineering at Clayton (Vic.); the Division of Exploration Geoscience at Perth (WA); the Division of Fuel Technology at Lucas Heights (NSW), and the Division of Building, Construction and Engineering at Highett (Vic.). The Institute Headquarters is located in Sydney (NSW).

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 139 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 $29 million are being handled by AMIRA.

International Relations

International relations are of considerable importance to the mineral industry. Australia is a large supplier of certain minerals to the rest of the world and the welfare of the domestic industry depends to a large extent on the maintenance of a high level of exports. The Commonwealth Government takes an active role in international consultations and discussions relating to minerals. The most important international links are shown below.

Association of Tin Producing Countries—ATPC

The ATPC came into being on 16 August 1983. Membership is open to countries which are net exporters of tin. The current members are Australia, Bolivia, Indonesia, Malaysia, Nigeria, Thailand, and Zaire. Major activities of the ATPC have been directed towards the encouragement of greater consumption of tin through research and development. This resulted in the London-based International Tin Research Institute (ITRI) becoming a subsidiary of the ATPC in 1988. Since 1987, the ATPC has operated a program of production restraint which, with the cooperation of non-members Brazil and China, is aimed at reducing excess tin stocks overhanging the market. The scheme was extended for twelve months from January 1990.

International Lead and Zinc Study Group—ILZSG

Australia has been a member of the ILZSG since its formation in 1959. The following countries are also members: Austria, Belgium, Brazil, Bulgaria, Canada, China Czechoslovakia, Denmark, Finland, France, Germany (Federal Republic of), Hungary, India, Iran, Italy, Japan, Korea (Federal Republic of), Morocco, Netherlands, Norway, Peru, Poland, South Africa, Spain, Sweden, Thailand, Tunisia, Union of Soviet Socialist Republics, United Kingdom, United States of America and Yugoslavia.

The main objectives of the Study Group are to provide a forum for intergovernmental consultations and to develop to the maximum extent possible transparency in the international lead and zinc markets.

Government and industry representatives meet annually to discuss developments in the international lead and zinc industry. The Group also undertakes special studies of the world situation in lead and zinc and considers possible solutions to problems unlikely to be resolved in the normal development of world trade. Particular attention is given to statistics on lead and zinc. The Study Group also publishes a monthly statistical bulletin and twice-yearly makes a short term forecast of the supply and demand for lead and zinc.

Association of Iron Ore Exporting Countries—APEF

APEF was established in 1975 with the following membership: Australia, Algeria, India, Liberia, Mauritania, Peru, Sierra Leone, Sweden and Venezuela.

Following the receipt in 1988 of notices of intention to withdraw from the Association by Sweden, Peru and Sierra Leone, the 27th session of the Board, held in March 1989, suspended the activities of the Association indefinitely. Venezuela is holding the secretariat pro tempore until the end of 1990 and the statistical function has been transferred to an independent trust fund within UNCTAD.

UNCTAD Intergovernmental Group of Experts (IGE) on Iron Ore

The UNCTAD IGE on Iron Ore was established in 1986 to discuss impediments to the formation of a producer/consumer forum to stabilise the market for iron ore.

Three meetings of the IGE have been held, the most recent in October 1989, with a further meeting scheduled to be held in October 1990.

In view of the IGE's scant progress towards its initial aim, the group has become a more general market transparency forum, and since the suspension of APEF, the only such forum on iron ore.

International Bauxite Association—IBA

Australia joined the IBA as a founder member in October 1974. Other members are Ghana, Guinea, Guyana, India, Indonesia, Jamaica, Sierra Leone, Surinam and Yugoslavia. Members account for about three-quarters of world bauxite production, with Australia accounting for over 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 cooperative 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. Australia has indicated that it is not bound by any decision the IBA might make regarding minimum pricing of bauxite and alumina. The Association publishes a quarterly review.

International Nickel Study Group—INSG

The INSG held its inaugural meeting on 25-28 June 1990. Founding members of the group are Australia, Canada, Cuba, Federal Republic of Germany, Finland, France, Greece, Indonesia, Japan, Netherlands, Norway and Sweden. Together these countries account for over 60% of world nickel trade.

The main objectives of the Study Group are to provide a forum for intergovernmental consultations and to develop a statistical and information gathering service to increase transparency in the world nickel market.

The secretariat of the group will be located in The Hague. Member Governments and their industry advisers will meet annually to discuss developments in the international nickel industry. The first of these meetings will be held in the first half of 1991.

Mining Industry Statistics

This section contains statistics of the mining industry in Australia, obtained from the annual census of mining establishments. The mining census is conducted throughout Australia on an integrated basis with other economic censuses, e.g. manufacturing, electricity and gas, retail, wholesale trade, construction, transport and selected services establishments.

The following table titled Mining Establishments, Summary of Operations, shows key items of data for 1988–89 based on the 1983 edition of the *Australian Standard Industrial Classification* (ASIC).

Mineral Production

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.

MINING ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY CLASS, 1988–89p(a)

ASIC code	*Description*	*Establishments at 30 June*	*Employment at end of June(b)*	*Wages and salaries (c)*	*Turnover*	*Stocks*		*Total purchases transfers in and selected expenses*	*Value added*	*Fixed capital expenditure less disposals*
						Opening	*Closing*			
		No.	No.	$m	$m	$m	$m	$m	$m	$m
	Metallic minerals—									
	Ferrous metal ores—									
1111	Iron ores	13	} 7,619	286	1,977	280	147	935	909	331
1112	Iron ore pelletising	1								
	Non-ferrous metal ores—									
1121	Bauxite	6	1,936	72	653	19	29	97	567	16
1122	Copper ores	5	2,673	107	684	62	68	179	511	96
1123	Gold ores	156	9,233	340	3,179	304	354	1,469	1,760	906
1124	Mineral sands	12	2,009	56	623	75	85	188	446	94
1125	Nickel ores	4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1126	Silver–lead–zinc ores	16	5,434	223	1,124	93	149	438	742	152
1127	Tin ores	9	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1128	Uranium ores	3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1129	Non-ferrous metal ores n.e.c.	6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
11	*Total metallic minerals*	*231*	*31,980*	*1,202*	*9,447*	*1,104*	*1,093*	*3,560*	*5,876*	*1,874*
	Coal, oil and gas—									
1201	Black coal	98	} 27,973	1,258	6,305	614	576	2,879	3,388	397
1202	Brown coal	2								
1300	Oil and gas	41	4,724	225	3,606	238	241	393	3,216	1,427
12–13	*Total coal, oil and gas*	*141*	*32,697*	*1,483*	*9,911*	*851*	*817*	*3,272*	*6604*	*1,824*
	Total metallic minerals, coal, oil and gas	**372**	**64,677**	**2,685**	**19,358**	**1,955**	**1,910**	**6,832**	**12,480**	**3,698**
	New South Wales	85	19,737	855	3,589	286	334	1,530	2,107	253
	Victoria	12	1,507	73	1,616	46	50	140	1,479	268
	Queensland	113	16,339	715	5,188	486	498	2,218	2,983	535
	South Australia	4	2,232	79	844	154	154	138	706	69
	Western Australia	125	20,156	775	6,465	656	558	2,272	4,095	2,309
	Tasmania	11	2,500	101	511	34	37	262	253	20
	Northern Territory	22	2,206	87	1,144	294	279	273	857	244

(a) The 1988-89 Census of Mining was restricted to the metallic minerals, coal, oil and gas industries. Previous mining censuses also included construction materials and other non-metallic industries. A full census will be conducted with 1989-90 as the reference year. *(b)* includes working proprietors. *(c)* Excludes amount drawn by working proprietors.

More recent tables showing quantities of selected minerals produced and contents of selected metallic minerals produced for 1987–88 and earlier years are contained in *Year Book* No. 73. Additional data for all minerals are available in the annual publication *Mineral Production, Australia* (8405.0).

Foreign Participation in the Mining Industry in Australia

Summary information on foreign participation in the mining industry in Australia is shown in Chapter 26, Foreign Transactions. More detailed statistics are available in *Foreign Ownership and Control of the Mining Industry, Australia 1984–85* (5317.0) and *Foreign Control in Mineral Exploration, Australia 1984–85* (5323.0).

Mineral Exploration (Other Than for Petroleum)

Definition

Exploration consists of the search for new ore occurrences or undiscovered oil or gas and/or appraisal intended to delineate or greatly extend the limits of known deposits of minerals or oil or gas reservoirs by geological, geophysical, geochemical, drilling and other methods. This includes construction of shafts and adits primarily for exploration purposes but excludes activities of a developmental or production nature. Exploration for water is excluded.

Source of statistics

The statistics of private sector exploration are derived from the quarterly mineral exploration census conducted by the Australian Bureau of Statistics (ABS) in each State and the Northern Territory.

Expenditure

The following table shows expenditure by State on private mineral exploration other than for petroleum in Australia during the last six years.

PRIVATE MINERAL EXPLORATION (OTHER THAN FOR PETROLEUM)
($ million)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Expenditure—						
New South Wales	55.6	49.5	51.8	47.6	61.5	50.6
Victoria	11.1	15.2	12.3	15.5	33.9	21.7
Queensland	80.7	79.5	88.6	120.6	159.3	139.8
South Australia	54.4	57.6	48.9	11.0	18.9	16.6
Western Australia	184.7	189.8	205.2	323.3	466.3	387.2
Tasmania	18.0	17.8	10.6	10.9	10.4	13.1
Northern Territory	24.2	28.0	24.6	27.9	48.9	68.6
Australia	**428.7**	**437.3**	**442.0**	**556.8**	**799.2**	**697.6**

The table below shows expenditure on private petroleum exploration in Australia during the last six years.

PRIVATE PETROLEUM EXPLORATION
($ million)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Expenditure—						
Onshore	283.1	419.6	367.8	171.0	271.9	233.6
Offshore	540.6	373.6	398.0	134.1	223.2	405.7
Total	**823.7**	**793.2**	**765.8**	**305.2**	**495.1**	**639.3**

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.

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		*1986–87*	*1987–88*	*1988–89*
	METALS*(b)*			
Non-ferrous—				
Alumina	'000 tonnes	9,840	10,328	10,601
Refined aluminium	"	921	1,074	1,227
Blister copper*(c)*	"	174	180	191
Refined copper	"	171	186	211
Lead bullion (for export)*(c)*	"	183	201	181
Refined lead	"	142	183	184
Refined zinc	"	300	305	303
Refined tin	tonnes	784	501	377
Ferrous—				
Pig iron	'000 tonnes	5,783	5,455	5,875
Precious—				
Refined gold*(d)*	kg	81,856	111,934	169,653
Refined silver	"	270,608	304,426	305,013
	FUELS			
Coal products—				
Metallurgical coke	'000 tonnes	3,253	3,727	3,889
Brown coal briquettes	"	811	809	751
Petroleum products*(e)*—				
Diesel-automotive oil	megalitres	8,198	9,399	9,774
Industrial fuel and marine fuel	"	240	229	175
Fuel oil for burning	"	2,274	2,078	2,272
Automotive petrol	"	15,296	15,995	15,913
	BUILDING MATERIALS			
Clay bricks	millions	1,847	1,867	2,142
Portland cement	'000 tonnes	5,920	6,158	6,901
	CHEMICALS			
Sulphuric acid	'000 tonnes	1,678	1,816	1,904
Superphosphate*(f)*	"	2,769	3,194	3,681

(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*: Australian Bureau of Agricultural and Resource Economics (non-ferrous and precious metals only). *(c)* Metallic content. *(d)* Newly won gold of Australian origin. *(e) Source*: Department of Primary Industries and Energy. *(f)* Includes double and triple superphosphate and ammonium phosphate expressed in terms of single superphosphate, i.e. 22 per cent P_2O_5 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 26, Foreign Transactions.

REVIEW OF RECENT DEVELOPMENTS IN THE AUSTRALIAN MINING INDUSTRY

(*Source*: **Australian Bureau of Agricultural and Resource Economics)**

Major recent developments in the Australian mining industry are reviewed briefly in subsequent parts of this section. Additional information on developments in the industry is available in *Agriculture and Resources Quarterly* (ARQ) and other Australian Bureau of Agricultural and Resource Economics statistical publications.

General review of 1988–89

Australia's Gross Domestic Product (GDP) in 1988–89 was $335,745 million, of which an estimated $24,860 million was generated by the mining industry, excluding metal smelting and refining. The addition of metal smelting and refining adds an estimated $5,841 million to this figure, and at 9 per cent makes minerals including energy and metals the largest primary sector contributor to the GDP.

This broadly defined sector experienced strong growth in 1988–89, as strong world demand for, and lagging supply of, metals fed through to higher prices. The ex-mine value of mine production in Australia in 1988–89 was approximately $16.5 billion. This was around $1.3 billion, or 9 per cent more than the 1987–88 value, and equal to the record level attained in 1985–86, in current dollars. While sector performance was mainly attributable to upward movements in metal prices, it also featured some notable improvements in production volumes. These offset generally declining energy prices and (excluding black coal), declining energy production volumes.

Major minerals to realise improved ex-mine production values were copper, diamonds, mineral sands (ilmenite and zircon), nickel and zinc, while the substantial increase in gold production was offset by an easing in gold price. Major minerals to record significant declines in ex-mine values were crude oil and LPG (declining price and production levels) and lead (price decline).

Exports—1988–89

The value of mineral exports rose by 9 per cent to a new record of $20.5 billion. Major minerals to show gains on their 1987–88 levels included alumina, aluminium metal, copper, diamonds, mineral sands (ilmenite and zircon), nickel and zinc. These improvements generally reflected the world surge in metal prices during the period, but in some cases improvements in export quantities were also significant.

Increased exports of aluminium reflect the continuing trend toward increased value added to resource exports by downstream processing of Australia's raw materials. Diamond export volumes rose significantly (19 per cent) while copper and zircon improved appreciably (10 per cent and 7 per cent respectively). Despite a 29 per cent increase in the quantity of gold exported, the value of gold exports rose by only 2 per cent as a consequence of declining world gold prices.

The energy industries did not fare as well. Decreases in the value of exports were recorded for crude oil, LPG, refined petroleum products, steaming coal and lead. Crude oil, LPG and refined petroleum product revenues fell as a result of both lower world prices and falls in export quantities, while steaming coal revenue fell (in spite of a marginal price improvement) as a result of declining export volumes. The value of lead exports fell by 19 per cent, despite a 7 per cent rise in export volumes, due to falling world prices.

With the sustained global recovery of the steel industry and increased use of steaming coal in electricity generation, black coal, at $4,630 million, remained Australia's single largest export earner, accounting for about 23 per cent of the value of mineral exports. Aluminium was the second largest earner with $2,511 million; gold, $2,456 million;

alumina, $2,238 million; zinc, $834 million; and nickel $770 million. These six minerals together accounted for approximately three-quarters of mineral exports and over one-third of the total value of all merchandise exports.

Imports—1988–89

The value of mineral imports continued to be dominated by crude oil and refined petroleum products, although their prominence weakened further. In 1988–89, the value of crude oil imports fell by 16 per cent to $1,183 million, despite an increase of 9 per cent in the quantity imported, reflecting the general weakening of world energy prices. The value of imported refined petroleum products increased by 19 per cent to $747 million, while quantities rose 24 per cent. Crude oil and refined petroleum product imports accounted for almost 70 per cent of the total mineral import bill of $2,786 million ($2,772 million in 1987–88).

Other significant mineral imports included diamonds and gold bullion (primarily for re-export), iron and steel, phosphate rock and sulphur. The volume of diamond imports was significantly down, recording a 35 per cent fall, however their value rose by 25 per cent, reflecting a shift to importation of higher value gem diamonds. Gold imports fell by 69 per cent, to less than one-third of their 1987–88 levels, as a result of declining Australian re-export trade. Iron ore imports rose significantly (a ten-fold increase in quantity and four-fold increase in value) from a low base, due to domestic production problems for specific ore grades.

Australia's mineral balance of trade (value of mineral exports minus value of mineral imports) was a record $17.8 billion in 1988–89 ($16.1 billion in 1987–88), reflecting the strength of world metal prices, which more than offset the effects of declining energy prices.

Pattern of mineral trade—1988

During 1988, Australia exported minerals to more than 100 countries. Japan accounted for 39 per cent of those exports, up from 37 per cent in 1987, which had been the lowest share since 1965. Principal mineral products exported to Japan included alumina, aluminium, black coal, copper, crude oil, gold, iron ore, lead, mineral sands, nickel and zinc.

The share of mineral exports going to Asian countries other than Japan has increased in recent years, and in 1988 accounted for 28 per cent of the total (24 per cent in 1987). The main country destinations and commodities exported were: Korea (Republic of) (aluminium, black coal and iron ore); Hong Kong (black coal and gold); and Taiwan (aluminium, black coal and iron ore).

These figures continue to reflect the trend of increasing Australian trade within the Asian region, with the Asian countries outside Japan providing major trade stimulus while the role of traditional European markets is diminishing. This trend is expected to continue.

The Middle East supplied 30 per cent of Australia's mineral imports by value in 1988 (38 per cent in 1987), while Indonesia provided a further 13 per cent (20 per cent in 1987). Other major suppliers in 1988 were Malaysia (10 per cent), Canada (6 per cent) and the United States (5 per cent). Middle East, Indonesian and Malaysian mineral imports were made up almost entirely of crude oil, while Canada and the United States were major suppliers of sulphur and fertilizers, with Canada also providing nickel and the United States supplying clays and diamonds.

Bauxite, alumina and aluminium

In 1988–89, production of bauxite increased by 6 per cent to 37.3 million tonnes, alumina by about 3 per cent to 10.6 million tonnes, and aluminium by 14 per cent to 1.2 million tonnes. Australia continues to be the world's largest producer of bauxite and alumina.

The value of exports of alumina and unwrought aluminium and aluminium alloys was a record $4.7 billion in 1988–89. Alumina accounted for $2.2 billion of this figure while unwrought aluminium and aluminium alloys comprised the remaining $2.5 billion. Exports of alumina totalled 8.3 million tonnes.

In Western Australia, Alcoa of Australia owns and operates four bauxite mines, Jarrahdale, Del Park, Huntly and Willowdale, with total annual capacity of 17.8 million tonnes. Worsley Alumina owns and operates an integrated operation with a bauxite mine (capacity 4 million tonnes a year) and alumina refinery at Mt. Saddleback near Boddington. The Gove joint venture, also an integrated facility, operates the Gove mine (5.8 million tonnes a year) and alumina refinery in the Northern territory, while Comalco owns and operates the Weipa mine (capacity of 11 million tonnes per year) in Queensland.

In Western Australia, all bauxite production is refined at either Alcoa's refineries at Kwinana, Pinjarra and Wagerup (total capacity 5.5 million tonnes a year) or at the Worsley refinery (1.2 million tonnes capacity a year). In the Northern Territory, bauxite not exported is refined at Nabalco's refinery at Gove (1.6 million tonnes capacity per year). Queensland Alumina operates the Gladstone alumina refinery (2.9 million tonnes capacity a year).

There are six smelters in Australia which produce primary aluminium. These are the Kurri Kurri and Tomago smelters in New South Wales; the Point Henry and Portland smelters in Victoria; the Boyne Island smelter in Queensland; and the Bell Bay smelter in Tasmania.

Identified recoverable resources of bauxite at 31 December 1989 were approximately 5,543 million tonnes.

Copper

Australia ranks as the eighth largest mine producer of copper, but accounts for only 3.6 per cent of mine production among the market economies. Nevertheless, copper is an important export earning mineral for Australia. In 1988–89 Australian mine production of copper increased by 21 per cent to 273,000 tonnes, mainly in response to firm prices and strong export demand. The only major new mine capacity to come on stream during 1988–89 was from Western Mining Corporation's Olympic Dam deposit in South Australia.

Refined copper production increased by 14 per cent, to 211,000 tonnes in 1988–89 as smelters, particularly the CRA Port Kembla copper smelter and refinery in New South Wales, increased capacity utilisation rates.

The gross value of copper exports rose by over 40 per cent to $557 million in 1988–89 in response to high prices, increased shipments to Japan and Korea (Republic of) and a slightly weaker Australian dollar.

Identified recoverable resources of copper at 31 December 1989 were approximately 6.5 million tonnes.

Gold

In 1988–89, Australia's gold production increased for the eighth successive year, reaching 721,281 kilograms, the highest since 1905. Australia is now the Western World's third largest producer. Western Australia continued to dominate Australian production and accounted for approximately 70 per cent of all gold produced in 1988–89.

Australia exported 154,590 kgs of gold during 1988–89 with a value of $2.456 billion. Even though the quantity exported increased by approximately 30 per cent on the previous year the value was only marginally higher due to lower world gold prices.

Identified recoverable resources of gold at 31 December 1989 were approximately 1,486 tonnes.

Iron ore and steel

Production of iron ore in 1988–89 declined by nearly 5 per cent to 97.4 million tonnes, primarily due to disruptions to production in key mining operations. Exports grew by 6 per cent to 96.0 million tonnes in response to growth in world steel production. Increased exports were facilitated by a large rundown of stocks.

Australia is the world's fourth largest iron ore producer (behind the USSR, China and Brazil) and the second largest exporter behind Brazil. During 1988–89, work proceeded on the Hammersley Iron/China Metallurgical Import and Export Corporation (CMIEC) Mt. Channar Joint Venture. It commenced operation in January 1990 with an initial annual production rate of 3 million tonnes. Production will be increased, as required, to 10 million tonnes per annum.

Identified recoverable resources of iron ore at 31 December 1989 were approximately 14,300 million tonnes.

Silver, lead and zinc

Mine production of both lead (487,000 tonnes) and zinc (769,000 tonnes) increased in 1988–89 by around 1 per cent on the previous year, while mine production of silver fell by nearly 5 per cent to 1,088 tonnes. Lead production rose slightly as world prices remained firm, while silver production, mainly a by-product of lead mining, fell as a consequence of reduced metal content in ore. Zinc production rose slightly, despite a sharp rise in world prices, due to short-term production capacity constraints.

Production of primary refined lead increased slightly to 184,000 tonnes in 1988–89, while production of primary refined zinc fell slightly to 303,000 tonnes due to production capacity constraints at the two domestic smelters at Cockle Creek and Port Pirie.

The gross value of lead exports declined by 20 per cent to $440 million in 1988–89, mainly due to lower contract prices for lead bullion, while the gross value of zinc exports increased by 43 per cent to $834 million due to higher world prices. The value of silver exports is confidential. However, the total quantity of silver metal exported in all ores, concentrates, intermediate products and in the refined state decreased by 10 per cent in 1988–89.

Estimated identified recoverable resources at 31 December, 1989 were: lead, 11.5 million tonnes; zinc, 20.4 million tonnes; and silver, 21.8 thousand tonnes.

Nickel

Mine production of nickel in ore and concentrates was 64,000 tonnes in 1988–89, down by 7 per cent on 1987–88 (69,000 tonnes). With increased world production, Australia slipped to being the fourth largest world producer behind Canada, the USSR, and New Caledonia. However, new mining projects and expansion of existing mines should lift Australian production substantially in the near future.

Production capacity in Western Australia has risen with the recent re-opening of the old Agnew, now Leinster mine. Proposed expansions of existing mines, together with other new projects at Forrestania, Mt. Keith and Radio Hill, will further lift Western Australian production. The Radio Hill facility will also have an on-site smelter.

Production of nickel ore in Queensland will decline with the closing of the Greenvale mine in 1991–92. Greenvale presently supplies ore feedstock to the Yabulu hydrometallurgical refinery near Townsville. This refinery is presently undergoing a major expansion and future ore supplies will be sourced from Indonesia and New Caledonia.

The value of Australian nickel exports in 1988–89 was $770 million, an increase of 45 per cent over 1987–88 ($530 million). This increase was mainly attributable to the sharp increase in world prices during the period.

Identified recoverable resources of nickel at 31 December 1989 were approximately 1.1 million tonnes.

Mineral sands

Australia is the world's largest producer and exporter of natural rutile, ilmenite, zircon and monazite. Output of concentrates in 1988–89 were: rutile 247,000 tonnes; ilmenite; 1,691,000 tonnes; zircon 513,000 tonnes; and monazite 13,000 tonnes.

Strong demand for mineral sands products resulted in the industry's export earnings rising sharply from $542 million in 1987–88 to $786 million in 1988–89, an increase of 45 per cent. This increase was mainly due to additional processing of ilmenite to synthetic rutile, and processing of synthetic rutile and ilmenite to titanium dioxide pigment before export, together with higher prices for zircon. The value added component of export earnings is projected to continue to rise from 35 per cent in 1988–89..

With the development of a number of new projects, Australia will continue to be the world's leading producer and exporter of mineral sands over the medium term. Most of Australia's expanded production capacity will be in Western Australia where the Cooljarloo, Eneabba and Jangardup deposits are being developed. A further deposit, near Beenup, is currently undergoing a feasibility study. Outside Western Australia, potential mines include the Rocky Point and Bayfield deposits in Queensland, the WIM–150 deposit in Victoria and the Newrybar deposit in New South Wales.

Estimated identified recoverable resources of mineral sands at 31 December 1989 were: ilmenite, 64.2 million tonnes; monazite, 360 thousand tonnes; rutile, 9.4 million tonnes; and zircon, 15.2 million tonnes.

Diamonds

Australia is the world's leading volume supplier of diamonds and accounts for around 30 per cent by quantity of the world's natural diamond production. However, by value it is the world's sixth largest producer behind the USSR, Botswana, South Africa, Namibia and Zaire, due to the relatively low proportion of gem quality stones mined.

Australian diamond production in 1988–89 was 35.1 million carats, the bulk of which (34.5 million carats) were produced at the Argyle diamond mine. This mine is currently undergoing a major upgrade which is expected to increase ore throughput from the present 4.5 million tonnes a year to 6 million tonnes. Diamonds from the AK-1 pipe at Argyle comprise 5 per cent gem quality, 45 per cent near-gem quality and about 50 per cent industrial grades.

While the majority of production (72 per cent) is marketed through the Central Selling Organisation, a significant proportion is now independently marketed. A cutting and polishing facility has been established in Perth and a large proportion of higher quality gems are now processed in Australia.

The Bow River Joint Venture near Argyle processed 2.5 million tonnes of ore in 1988–89 to produce 0.58 million carats of diamonds. Diamonds from Bow River comprise 20 per cent gem quality, and 80 per cent industrial quality.

Estimated identified recoverable resources of diamonds at 31 December 1989 were: gem and cheap gem, 179 million carats and industrial, 214 million carats.

Black coal

Raw black coal production in 1988–89 was a record 183.5 million tonnes, 9 per cent higher than in 1987–88. The output of saleable coal rose by 10 per cent to the record level 149.3 million tonnes. Domestic consumption rose to the record level of 49.9 million tonnes in 1988–89, mainly due to the growth in use by the electricity and iron and steel industries. Exports fell by 5 per cent to 96.9 million tonnes in 1988–89 and the value of exports fell to $4,630 million. Of total exports 46.3 million tonnes were shipped to Japan.

Demand for steaming coal on the international market has remained high. However, Australian exports of steaming coal fell to 40.1 million tonnes in 1988–89. Coking coal exports declined by less than 1 per cent in 1988–89 compared with 1987–88, to 56.9 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.

Uranium

During 1988–89, uranium was produced from the Ranger and Nabarlek operations in the Northern Territory and Olympic Dam in South Australia. Total production for the year was 4,506 tonnes U_3O_8. Uranium exports for 1988–89 were 5,060 tonnes U_3O_8 at an average f.o.b. unit value of $36.12 per pound U_3O_8. The production phase of the Olympic Dam copper–uranium–gold project commenced in August 1988. Although the project has an annual capacity of 1,900 tonnes U_3O_8, production in 1988–89 was 910 tonnes U_3O_8.

Petroleum

In 1988–89 production of crude oil and condensate decreased by 9.6 per cent to 28,255 million litres, LPG production decreased by 4.1 per cent to 3,763 million litres, and total natural gas production rose 3.3 per cent to 15,956 million cubic metres.

Identified recoverable resources of crude oil and condensate at 31 December 1988 were approximately 451,000 million litres, LPG resources were approximately 167,000 million litres and natural gas resources were 2,081 billion cubic metres, of which 1,537 billion cubic metres were located in the Browse and Carnarvon basins off the coast of Western Australia.

Consumption of petroleum products in 1988–89 totalled 40,500 million litres, an increase of 4.4 per cent over 1987–88. Consumption of automotive gasoline (motor spirit) increased by 3.1 per cent to 17,078 million litres, with unleaded gasoline making up 20.7 per cent of total consumption, up from 14.5 per cent the previous year. Consumption of most major products rose in 1988–89, while consumption of industrial diesel fuel, kerosene, heating oil and other minor products all decreased.

Exports of crude oil and other refinery feedstock decreased in 1988–89 by 23.7 per cent to 4,921 million litres, while imports rose 8.7 per cent to 10,409 million litres. The value of net crude oil and other refinery feedstock imports increased by 36 per cent, to $593 million. LPG exports decreased by 9 per cent in volume and 34 per cent in value, to $161 million. The volume of refined petroleum product exports increased by less than 1 per cent to 2,761 million litres, while imports increased by 24 per cent to 4,101 million litres. The value of net refined petroleum product imports rose to $244 million, compared with $67 million in 1987–88.

Expenditure on petroleum exploration and development in Australia in 1988–89 was approximately $2.4 billion. The level of onshore exploration activity was depressed in 1988–89. Offshore activity continued to rise both in terms of the number of wells drilled and the amount of seismic surveying undertaken. In the 1988 calendar year, 243 exploration wells were drilled (211 onshore and 32 offshore). Offshore development activity continued strongly in 1988–89, with the completion of the initial liquefied natural gas production and export facilities of the North West Shelf project, to which a total expenditure of $6.4 billion had been committed by mid 1989. There was further development of fields in Bass Strait, the Timor Sea and elsewhere on the North West Shelf.

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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 ground water supplies and use, and the drainage divisions in Australia. The latter summarises Australian and State assessment and management of water resources.

The information in this chapter is largely derived from the *1985 Review of Australia's Water Resources and Water Use* (published by the Department of Primary Industries and Energy for the Australian Water Resources Council, November 1987, and available from AGPS bookshops).

For information concerning general, descriptive and historical matter *see Year Book* No. 37, pages 1,096–1,141 and *Year Book* No. 51, pages 228–31.

Introduction

Rainfall, or the lack of it, is the most important single factor determining land use and rural production in Australia. Chapter 5, Physical Geography and Climate of Australia contains details on geographical and climatic features that determine the Australian water pattern. The scarcity of both surface and ground water 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 5, Physical Geography and Climate 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. 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; this in turn, influences 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.

In the text and tables below, water volume, usage and flow are shown in litres rather than in cubic metres as in earlier issues. Equivalence and terms used are:

(KL) Kilolitres=1.00 x 10^3 litres (1 cubic metre)
(ML) Megalitres=1.00 x 10^6 litres
(GL) Gigalitres=1.00 x 10^9 litres
(TL) Teralitres=1.00 x 10^{12} litres

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 398 teralitres (TL) of which 100 TL 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

The portion of runoff able to be diverted for use is very low compared to other continents, and results from the high variability of streamflow, high rates of evaporation and the lack of storage sites on many catchments. On an Australia-wide basis, only 21.5 per cent of the divertible resource has currently been developed for use; much of the remaining resource is available in remote regions where development is impractical and uneconomic. In areas such as the Murray–Darling Division, where water is a scarce resource, there are few resources not yet developed, and management is focusing on greater efficiency in water use.

SURFACE WATER RESOURCES AND USE BY DRAINAGE DIVISIONS
(*Source*: Australian Water Resources Council, 1987)

		Surface water resources (teralitres per annum)				
Drainage division		*Mean annual runoff*	*Divertible resource*	*Developed Use*	*resource*	*Use as % of developed*
I	North-East Coast	83.9	22.9	3.5	0.97	28
II	South-East Coast	41.9	15.1	4.3	2.03	47
III	Tasmania	52.9	10.9	1.0	0.17	17
IV	Murray–Darling	24.3	12.4	10.0	8.05	81
V	South Australian Gulf	0.9	0.7	0.1	0.23	*100
VI	South-West Coast	6.7	2.9	0.4	0.38	95
VII	Indian Ocean	4.0	0.3	—	0.00	0
VIII	Timor Sea	80.7	22.0	2.0	0.10	5
IX	Gulf of Carpentaria	92.5	13.2	0.1	0.12	*100
X	Lake Eyre	6.3	0.2	—	0.01	33
XI	Bulloo–Bancannia	1.1	—	0.00	0.00	0
XII	Western Plateau	1.6	0.1	0.00	0.00	0
Australia		**398**	**100**	**21.5**	**12.06**	**56**

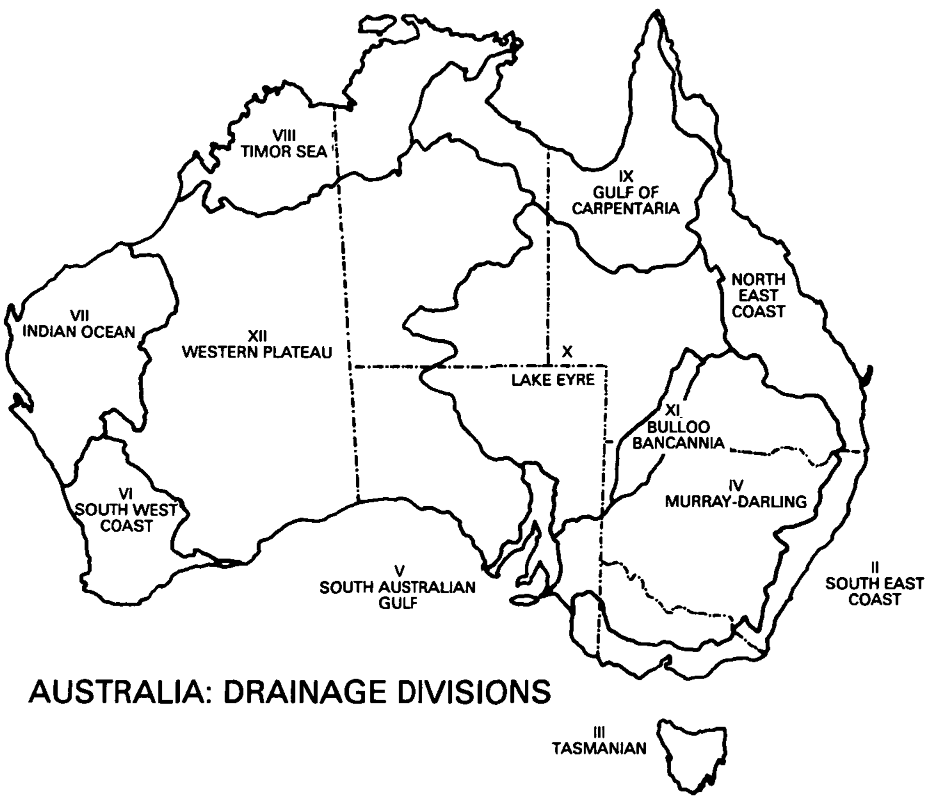
* Includes use of water from unregulated sources.

The resource is assessed within a framework comprising four levels:

- the **total water resource** is the volume of water present in the environment, measured as mean annual runoff for surface water, and mean annual recharge for groundwater;
- the **divertible resource** is the portion of runoff and recharge which can be developed for use;
- the **developed resource** is the portion of the divertible resource which has been developed for use; and
- **resource utilisation** is a measure of the portion of the developed resource which is actually used.

Emphasis is given to the second level of assessment, the divertible resource, as the prime measure of the resource. The divertible resource is defined as 'the average annual volume of water which, using current technology, could be removed from developed or potential surface water or groundwater sources on a sustained basis, without causing adverse affects or long term depletion of storages'.

Drainage Divisions



Ground Water Supplies, Water Quality and Water Use

For further information concerning ground water supplies, water quality and water use in Australia *see Year Book* No. 73, pages 497–499.

Major Dams and Reservoirs

A *Register of Large Dams in Australia* was published by the Australian National Committee on Large Dams in December 1982. The publication included, in chronological order, all large dams completed or under construction up to December 1982. For a listing of dams with a gross reservoir capacity of more than 100 GL, *see Year Book* No. 73, pages 499–501. The list is based on the above publication and supplementary data for the latest years. A further edition of the Register of Large Dams in Australia is in preparation.

Water Management

Australia's water resources are managed by a large number of resource management agencies, 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 coordination or operation of interstate projects through bodies such as the Murray–Darling Basin Commission. In other instances where political boundaries intersect some river basins, cooperation 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.

Commonwealth water policy

In September 1984, the Commonwealth released its new water policy. The objectives are to:

- ensure availability of water, adequate in quantity for all beneficial uses;
- adopt measures which improve the efficiency of water supply and use;
- develop a comprehensive approach to inter-related water and land management issues;
- encourage comprehensive long-term plans for the development and management of water resources; and
- implement 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 policy, funds are available to the States and the Northern Territory under a program, the Federal Water Resources Assistance Program (FWRAP) which commenced in 1984–85. Funds are available for purposes which 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.

The Commonwealth also contributes to the expenses of the Murray–Darling Basin Commission under the River Murray Waters Agreement and the Murray–Darling Basin Agreement. This includes the Commission's expenditure on administration, the construction and investigations program related to it's regulatory responsibilities and the Murray–Darling Basin Salinity and Drainage Strategy and Natural Resources Management Strategy.

Australian Water Resources Council—AWRC

The AWRC was established in 1963 by joint action of the Commonwealth Government and the State Governments. The Council consists of the Commonwealth, State and Northern Territory Ministers with portfolio responsibilities for water resources; it is chaired by the Commonwealth Minister for Primary Industries and Energy.

The Council provides the peak forum for the water industry. A major shift in emphasis that has occurred in the water industry in recent years has been from water resource development to resource management and the focus of AWRC activities is on industry-wide issues such as micro-economic reform, particularly through demand management measures and organisational management. The AWRC is playing a leading role in the development of a national strategy for sustainable water quality management. The strategy provides a nationally consistent set of principles for water quality management, emphasising the need for economic efficiency as well as the need to maintain and improve environmental quality.

Council's terms of reference include the promotion of modern technology in the water industry, development of policies to protect the quality and quantity of surface and underground waters, coordination and dissemination of information, development of effective human resources management techniques and liaison with overseas and international organisations in the field of water resources. Council is supported by a Standing Committee, comprising permanent heads of relevant State authorities and the Commonwealth Department of Primary Industries and Energy; and four advisory committees.

Water resources research

The Department of Primary Industries and Energy is responsible for Commonwealth interests in water resource matters.

In July 1990, the Land and Water Resources Research and Development Corporation (LWRRDC) was established to provide leadership and national coordination of research into land, water and related non-commercial forestry issues. It will also be responsible for determining national research priorities and in doing so will consult its five 'representative organisations': the Australian Conservation Foundation, National Farmers' Federation, National Association of Forest Industries, Standing Committee on Soil Conservation, and the Standing Committee of the Australian Water Resources Council. The LWRRDC, which will initially be wholly funded from Commonwealth appropriation, will have $10.92 million in funds in its establishment year (1990–91).

In regard to water research and development issues, the LWRRDC assumed the responsibilities performed until June 1990 by the Australian Water Research Advisory Council (AWRAC). AWRAC was established in June 1985 to advise on national research needs and on the Commonwealth funded National Water Research Program (NWRP). Funding for the NWRP was $7.3 million in 1988–89 and $7.0 million in 1989–90. Projects funded under the 1989 call included research on salinity, groundwater, stream ecology, wastewater management, hydrology and water treatment and quality. Activities to effectively disseminate the results of research were also undertaken.

The NWRP also funds twelve Centres of Concentration in Water Research and provides financial assistance to the Murray–Darling Freshwater Research Centre in Albury, the Urban Water Research Association of Australia and the National Irrigation Research Fund.

In 1989–90, CSIRO spent approximately $15 million (of direct appropriation funds) on water resources research. Competitive research grants, consultancies, and collaborative research provides an additional amount of approximately $5m for work of direct relevance to the Australian water industry. The Division of Water Resources (resulting from the amalgamation in 1987 of the Divisions of Groundwater Research, Water and Land Resources, and the Centre for Irrigation and Freshwater Research) has a total staff of more than 230 with laboratories in Perth, Adelaide, Canberra and Griffith. The Division's task is to develop new and improved practices for the definition, use, and management of Australia's water resources. The Division of Chemicals and Polymers, based at Clayton, Victoria, is responsible for research on new methods of treating municipal water and wastewater, and cleaning up effluents from a wide range of manufacturing industries. The Centre for Environmental Mechanics conducts research on soil–water processes, evapotranspiration and physical limnology. The Division of Coal and Energy Technology carries out research aimed at assessing the impact on natural waters of mining and industrial processing. Research on soil–water processes and erosion is conducted by the CSIRO Division of Soils.

CSIRO is a partner with AWRAC, the River Murray Commission, and the Albury–Wodonga Development Corporation in the Murray–Darling Freshwater Research Centre.

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 bodies, such as AWRAC or the Australian Research Grants Committee. Water research is carried out within a range of disciplines, including the biological and social sciences and engineering.

International Aspects and National and Interstate Agreements

For further information on international aspects and for national and interstate agreements on the management of water resources *see Year Book* No. 73, pages 504–507.

New South Wales

Administration

The New South Wales Department of Water Resources was set up in 1987, succeeding the previous Water Resources Commission. The Department is responsible for maximising the long term benefits of the State's water resources to meet the changing diversity of water uses and values of the community. Main responsibilities of the Department are to coordinate policies and programs of State and local government authorities providing water supplies and other water services; plan for future water needs; operate the rural water supply network; control the use and management of surface water and ground water resources through water licensing and transfer systems; provide floodplain management and flood mitigation services in non-tidal areas; provide for wetlands, wild and scenic rivers and instream or environmental water needs; improve water quality; control salinity; maintain water resource assessment programs; and effectively manage the State's water infrastructure.

Water use

Irrigation takes up the largest volume of consumption water use in NSW, on average 75 per cent, with urban water consumption in Newcastle, Sydney and Wollongong taking up the bulk of the remaining 25 per cent.

Urban water

Major metropolitan urban water supplies are managed by central water boards at Newcastle and Sydney. Water sources for major cities of Sydney and Wollongong are good quality rivers and associated storages on the Hawkesbury, Georges and Shoalhaven Rivers. Newcastle's water supply is taken from the Chichester and Grahamstown Reservoirs and from ground water in coastal sandbeds. Country towns develop their own water supply systems ranging from run-of-river pumping to ground water extractions, to dams built specifically for urban water supply. Metropolitan water authorities are increasingly managing urban water demand to reduce water consumption by a range of mechanisms including pricing and persuasion. Drought management and asset management are more recent areas of concern for metropolitan water utilities who are also increasing their interest in balanced environmental management of water supply catchments.

Irrigation

The bulk of irrigation in New South Wales is within the Murray–Darling Basin, the centre of recent Commonwealth/State initiatives in land and water management to reduce salinity problems. Twenty four storages, including four shared with Victoria and South Australia and one shared with Queensland, regulate water supplies in the Basin.

Two main irrigation arrangements exist Statewide. Licensed irrigation occurs where licensees take water from rivers, usually by pumping at their own cost. Around 1.5 million megalitres per annum is used in this way.

Irrigation Areas and Districts form the second type of irrigation. These are located on the three southern inland rivers—the Murray, Murrumbidgee and Lachlan and include over 6,300 farms and holdings covering nearly 1.4 million hectares. About a third of this area is usually irrigated using 1.4 million megalitres per annum. Extractions from licensed high-yielding bores now approach 300 gigalitres per annum.

The annual gross value of production in the Murray–Darling system is around $800 million, about 20 per cent of the State's total agricultural production. Nevertheless the growing extent of land degradation and salinisation in the Murray–Darling Basin is reducing productivity and increasing costs of production.

Future planning and programs

Water management is coordinated through the NSW Water Resources Council, which was established in 1988 and advises the Minister for Natural Resources. It is composed of the heads of government agencies which have a role in water management along with representatives of major interest groups. The Council is coordinating state water planning activities and has released a State Rivers Policy and other policies in being developed.

With large dams on all the main inland rivers in NSW, few further major irrigation storages are likely to be constructed. An enlargement of Pindari Dam on the Severn River in the north of the State is planned, to provide an additional volume of 85,000 megalitres of regulated supply annually. This is to be funded as a joint venture with local water users and the Government, the first time that private financial contributions towards the construction of a major irrigation storage dam has been negotiated.

However, improving water use efficiency is one management target for the irrigation sector and heavy industry. This is being achieved throughout the State through improved rural water delivery systems, management of urban water demand, and monitoring of agricultural and urban water losses. In the rural sector transferable water rights, licensing and variable water allocations serve to increase water use efficiency.

Ameliorating waterlogging and salinisation of farming lands is an environmental management priority for the Commonwealth and States, and NSW is pursuing this through a State funded SALTACTION initiative and through the Murray–Darling Basin Ministerial Council. For further information on salination see special article *Salinity—An Old*

Environmental Problem in *Year Book* No. 73 (1990). NSW is achieving the integration, coordination and consultation required in developing land and water management on a catchment basis through the Total Catchment Management framework which was given statutory backing in the *Catchment Management Act, 1989.* A state coordinating committee oversees policy while seven regional Total Catchment Management (TCM) committees have been established to coordinate programs and planning. Floodplain management and flood irrigation programs are being continued. Policies addressing State Wetlands, State Rivers, and Groundwater are being prepared. Aspects of development such as intensive cattle feed lots are being promoted vigourously, while potential for water quality inputs are being closely monitored.

Victoria

Administration

Water resources in Victoria are administered by three major agencies, the Office of Water Resources, the Melbourne Metropolitan Board of Works and the Rural Water Commission. The Office of Water Resources, formerly the Department of Water Resources, is an agency of the Department of Conservation and Environment (established 1990), responding to the Minister on matters regarding the water sector. The Melbourne Metropolitan Board of Works is a statutory corporation servicing most of Melbourne with water and sewerage as well as providing various other services such as drainage and parklands. The Rural Water Commission is a public business authority primarily concerned with providing water for a variety of uses to rural Victoria.

Aside from these major agencies, some one hundred and forty non-metropolitan authorities and thirty river management authorities are involved in managing the resource. Non-metropolitan authorities range widely in size, serving from 200,000 to less than a thousand people in rural townships, while river management authorities are responsible for protecting the State's rivers.

Water use

In an average year water consumption in Victoria is as follows:

- 77 percent irrigated agriculture;
- 16 percent urban; and
- seven percent rural stock and domestic.

Rural water supply systems

- **Goulburn–Campaspe–Loddon.** The main storage is Lake Eildon with a capacity of 3,390 gigalitres. 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, fruit, vineyards, orchards and market gardens. 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 Macalister 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 Reservoir, Melton Reservoir and Lake Merrimu.
- **Wimmera–Mallee Domestic and Stock Supply System**. Storages in the Grampian Ranges ensure farm water supplies for dry land, pastoral and cereal farming in the

Wimmera and Mallee. There are small areas of irrigation supplied from this system near Horsham and Murtoa.

Future programs

Future capital programs for the water sector in Victoria include:

- provision of water distribution and sewerage services to developing metropolitan areas and regional country centres;
- improved water and sewage treatment facilities; particularly in non-metropolitan regions; and
- infrastructure replacement, including rehabilitation of headworks in irrigation areas.

Queensland

Administration

The control of surface and underground water is exercised by the Commissioner of Water Resources on behalf of the Crown through the licensing of all artesian bores, sub-artesian bores within districts declared for the purpose, and works for the conservation and use of surface water together with the issuing of permits for domestic and stock water use.

In respect of the water resources of the State, the Commission is required to prepare a complete description and keep a record of naturally occurring surface and underground water; take steps to protect the resources from factors likely to be detrimental to their quality or diminish their quantity; investigate and survey any natural water resource; coordinate the investigation, evaluation and development of plans for the control of floodwaters and mitigation of flood damage; construct and manage works for the conservation, replenishment, utilisation and distribution of water; provide advice to local authorities in relation to water supply, sewerage, drainage, flood mitigation and swimming pools; and provide an extension and design service for on-farm development of water resources.

As the water resource assessment and planning authority, the coordination of this resource is ensured, for the net benefit of the community. This includes rural, urban, industrial, mining and other users to bring the overall planning together for continuity. The Commission assesses the water resources and determines how these can best satisfy present and future demands for water related activities. The Commission develops, manages, operates and maintains all State owned water conservation works, having an overall management role at the broad resource level as well as in day-to-day activities of many areas.

Summary of schemes

Approximately half of the area irrigated in Queensland now uses water from storages constructed by the Water Resources Commission. The balance is irrigated from unsupplemented surface or underground supplies spread widely throughout the State. Because of the predominance of irrigation by private diversion from streams, as opposed to channel systems delivering water to farms, most of the storages release water to maintain supplies downstream.

Irrigation areas and projects

Approximately one-third of the area irrigated in Queensland each year is concentrated in eight Irrigation Areas constituted under the *Water Resources Act 1989* where the supply is generally reticulated by channel systems to the farms. Irrigation projects are schemes established under the *Water Resources Act 1989*, where water is released from storages to maintain supplies for pumping under licence to land adjacent to the streams. Details of the projects are set out in the accompanying table.

IRRIGATION AREAS AND PROJECTS, QUEENSLAND, 1989–90

	Announced allocations(a)				*Actual use(a)*		
	Irrigation		*Other uses*				
	Outlets	*Allocation*	*Outlets*	*Allocation*	*Irrigation*	*Other uses*	*Area irrigated*
	No.	megalitres	No.	megalitres	megalitres	megalitres	hectares
Irrigation Areas—							
Bundaberg*(a)*	2,227	318,254	6	15,625	193,856	7,945	45,295
Burdekin River	592	72,406	234	114	82,332	115	15,138
Dawson Valley	304	43,801	9	3,043	25,091	1,411	4,874
Emerald	226	99,553	4	27,448	107,349	21,754	21,578
Eton	574	53,930	48	8,567	24,497	9,967	14,653
Lower Mary River	149	15,665	—	—	9,637	—	3,400
Mareeba–Dimbulah	1,223	81,154	1,182	80,059	60,165	138,718	30,016
St George*(b)*	271	71,511	31	3,368	61,625	2,740	14,150
Sub-Total	*5,566*	*756,274*	*1,514*	*138,224*	*564,552*	*182,650*	*149,104*
Irrigation projects—							
Awoonga–Callide Pipeline	—	—	2	11,000	—	10,401	—
Barker–Barambah	116	28,829	4	1,600	5,107	1,715	4,700
Bedford Weir (Company Pipelines)*(c)*	n.a.	n.a.	15	4,987	n.a.	3,691	—
Bingeang Weir (Company Pipelines)*(c)*	n.a.	n.a.	28	9,852	n.a.	8,292	—
Blackwater Water Supply System	—	—	26	6,639	—	6,386	—
Bowen–Broken Rivers	—	—	47	9,268	—	2,224	—
Boyne River	53	15,901	—	—	5,572	—	1,100
Callide Dam (and Pipelines)	343	30,272	19	4,898	22,081	4,097	12,400
Chinchilla Weir	30	2,942	1	1,160	1,139	669	1,200
Condamine Groundwater	352	65,420	14	4,008	29,901	2,594	n.a.
Dumaresq River	183	62,744	5	1,575	17,454	1,481	10,500
Eungella Dam (and Pipelines)	—	—	44	6,400	—	5,557	—
Fitzroy River Barrage*(d)*	140	11,341	—	—	n.a.	—	n.a.
Logan River	165	11,196	6	4,130	3,310	1,711	3,906
Lower Lockyer	188	11,412	—	56	5,454	—	4,300
Macintyre Brook	153	18,204	1	450	6,571	310	2,300
Mary Valley	208	12,275	4	7,014	5,747	3,884	2,760
Tarong Water Supply System	—	—	—	27,327	—	27,327	—
Three Moon Creek	110	13,707	8	601	12,218	459	3,500
Upper Burnett	240	29,673	4	1,560	18,257	687	2,800
Upper Condamine	107	29,543	3	3,328	15,215	2,188	9,600
Warrill Valley	424	20,005	6	13,700	8,313	4,715	8,170
Sub-Total	*2,812*	*363,464*	*237*	*119,553*	*156,339*	*88,388*	*67,236*
Total	**8,378**	**1,119,738**	**1,751**	**257,777**	**720,891**	**271,038**	**216,340**

(a) Includes Groundwater component. *(b)* Irrigation includes some waterharvesting component. *(c)* Now included in Emerald Irrigation Area figures. *(d)* Tentative figures, being reviewed and may change.

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 Act 1989* the investigation of the availability of underground water is being pursued by geological mapping, investigation drilling and hydro-geological assessment. The predominant areas where water from this source is used for irrigation are the Burdekin Delta, Condamine Valley, Bundaberg, Lockyer Valley, Callide Valley and Pioneer Valley.

Groundwater supply and drainage schemes

The *Water Resources Act 1989* provides for the constitution of an area for various works including water supply for stock, domestic and irrigation purposes, drainage and improvement of subterranean water supplies and the creation of a Board to administer the area.

Seventeen Drainage schemes, 57 Bore Water areas and 24 Rural Water Supply schemes are in operation.

Western Australia

Administration

The Water Authority of Western Australia controls the majority of water-related services in Western Australia. It was constituted under the provisions of the *Water Authority Act 1984*, and administers eight other Acts and associated by-laws and regulations.

The Water Authority is responsible, under the control of the Minister for Water Resources, for the general administration of the Act. An eleven-member Board of Management controls the Authority's operations and reports to the Minister.

The Water Authority is responsible for the following water related services: water supply in the Perth metropolitan area and the majority of country towns; water resources assessment and management throughout the State; Government irrigation schemes; sewerage schemes in the Perth metropolitan area and several country towns; major drains in the Perth metropolitan area and drainage in several country areas.

Water supply

Western Australia has a great variation in the size and complexity of water supply schemes, which range from town schemes serving fewer than 50 people to the Perth metropolitan scheme serving a population of 1,100,000.

The table which follows shows the principal water storages in Western Australia.

Considerable use is made of ground water by individual farmers, pastoralists, market gardeners, etc., and it is estimated that over 100,000 bores are in use in the State. Both artesian and non-artesian sources are used to supply or augment the supplies of numerous towns, including such major centres as Perth, Albany, Bunbury, Busselton, Carnarvon, Dampier, Esperance, Exmouth, Geraldton, Karratha and Port Hedland. In a number of mining towns in the north-west, mining companies are responsible for the provision of their own water supplies. Industries also use ground water in substantial quantities, particularly in the processing of titanium, iron and alumina.

RESERVOIRS—STORAGE CAPACITY(a)
(Megalitres)

Reservoir	*Storage Capacity*	*Reservoir*	*Storage Capacity*
Canning*(b)*	90,500	Samson Brook	9,170
Churchman Brook*(b)*	2,200	Serpentine Pipehead*(b)*	2,640
Drakes Brook	2,290	Serpentine*(b)*	194,500
Fitzroy	4,650	17-Mile Dam*(c)*	5,489
Glen Mervyn	1,490	South Dandalup*(b)*	208,200
Harding	63,800	Stirling	56,123
Harvey Weir	9,126	Victoria*(b)*	860
Kununurra Lake (Ord River)	97,400	Waroona	14,954
Logue Brook	24,300	Wellington	184,900
Mundaring	77,000	Wungong*(b)*	60,000
Lake Argyle (Ord River)	5,797,000		

(a) At 30 June, 1989. *(b)* Serves the Perth Metropolitan Area. *(c)* On Uralla Creek, an anabranch of the Fitzroy River.

Perth metropolitan water supply

Perth is supplied from a number of dams and pipeheads in the Darling Range and from ground water schemes located on the Swan Coastal Plain. Water gravitates or is pumped from these sources to service reservoirs and tanks located at high points over the metropolitan area for gravity feed to consumers. Perth's water consumption is currently about 200 gigalitres per year and is increasing.

Country water supplies

The Water Authority is responsible for all town water supply schemes in the country towns of Western Australia, with the exception of the Bunbury and Busselton schemes which are run by local Water Boards. There are also a small number of town water supply schemes operated by mining companies. Individual water supplies serve railways, timber mill towns, isolated mines, pastoral properties, stock routes and agricultural areas, mainly from dams, tanks, wells and bores.

In country areas total control has been exercised on ground water usage in Broome, Gascoyne, Swan and South West Coastal Ground Water areas. The control of other areas has been tailored to the specific problems known to exist.

- **Goldfields and Agricultural Areas Water Supply.** This scheme provides water from Mundaring Weir to consumers in the Central Agricultural Areas and the Eastern Goldfields.
- **West Pilbara Water Supply Scheme**. The West Pilbara Water Supply serves the towns of Dampier, Karratha, Wickham, Point Samson and Roebourne as well as the industrial complexes at Dampier, the Burrup Peninsula and Cape Lambert. Water is supplied exclusively from the Millstream aquifer and the Harding Dam.
- **Geraldton Regional Water Supply Scheme**. The Geraldton Regional Water Supply serves consumers in the towns of Geraldton, Dongara, Port Denison, Mullewa, Walkaway, Eradu and Narngulu with water being drawn from the Wicherina, Allanooka and Wye Springs borefields.
- **Great Southern Towns Water Supply.** This scheme provides water to the coal mining town of Collie together with towns and farmlands in the Great Southern Area. Water is drawn from Wellington Reservoir, which has a capacity of 185 million m^3, and supplied to towns from Brookton and Kondinin in the north to Kojonup and Gnowangerup in the south and to Lake Grace in the east as well as 600,000 hectares of farmland.
- **Port Hedland Regional Water Supply Scheme**. The Port Hedland Regional Water Supply provides water for the consumers of Port Hedland and South Hedland from the complementary De Grey and Yule River borefields.
- **Lower Great Southern Towns Water Supply Scheme**. This scheme supplies the towns of Albany, Mt Barker and Kendenup. Water is drawn from three sources; Two Peoples Bay east of Albany (from which the water is treated for colour removal), Limeburner's Creek and bores which are located on the west of Princess Royal Harbour.
- **Mandurah Regional Water Supply Scheme.** This scheme provides water to the town of Mandurah and areas to the south and east. Approximately 90 per cent of the water consumed is supplied by gravity from the South Dandalup Dam with the remainder supplied from bores at Ravenswood.
- **Supplies to other country towns.** Nearly 150 towns are supplied with water from stream flow, dams, tanks, wells and bores, the schemes being administered under the provisions of the *Country Areas Water Supply Act 1947*.

The Water Authority is responsible for the provision and maintenance of tanks and wells as a source of cartage water for farmers and a number of small communities in gold mining and agricultural areas.

The Water Authority also undertakes design and construction of water services for Aboriginal communities on behalf of the Aboriginal and Torres Strait Islander Commission. The Authority under contract to the Aboriginal Affairs and Planning Agency assists communities in operating and maintaining schemes and training community operators.

Irrigation schemes

The Water Authority is responsible for the operation and maintenance of seven irrigation and 15 drainage schemes throughout the State from Albany in the south to Kununurra in the north.

Irrigation schemes have been established by the State Government on the coastal plain south of Perth in the Waroona, Harvey, Collie River and Preston Valley Irrigation Districts between Waroona and Donnybrook, the water being channelled from dams in the adjacent Darling Range.

There is a thriving plantation industry situated at Carnarvon near the mouth of the Gascoyne River. This centre is one of the major producers in Western Australia of tomatoes, watermelons, pumpkins, cucumbers, capsicums and runner beans. Carnarvon also supplies capsicums, zucchinis and pumpkins to the eastern States. It produces over half the bananas consumed in Western Australia as well as limited supplies of citrus fruit, mangoes and avocados.

The rainfall at Carnarvon is extremely variable and averages little more than 230 millimetres per annum. Agricultural development has been made possible only by irrigation with ground water. Water is obtained from the growers' own irrigation pumping plants and from the government-controlled Carnarvon Groundwater Supply Scheme which is supplied from bores along the Gascoyne River.

The Ord Irrigation Project provides for the ultimate development of 72,000 hectares of clay soils and additional areas of sandy soils adjoining the clays. Water is currently supplied to 14,000 hectares.

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*, 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*, provides for the control of small reservoirs, bores, tanks, etc. established in remote areas as emergency water supplies or to assist local development.
- The *Murray–Darling Basin Act 1983* (which renames the *River Murray Waters Act 1983*) ratifies the Murray–Darling Basin Agreement of October 1987. The Department is the delegated constructing and operating authority for the Murray–Darling Basin Commission in South Australia and has built and operates the Lake Victoria regulating storage, nine locks and weirs along the river and the five barrages at the River Mouth.
- The *Water Resources Act 1990*, provides for 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. It establishes a South Australian Water Resources Council and Regional Advisory Committees as vehicles for public participation in the water resources management process, and 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. Currently water diversions totalling more than 445,216 ML are made for government, cooperative and private irrigation schemes in the South Australian section of the River Murray. The authority controlling River Murray irrigation is the Engineering and Water Supply Department.

Except for quantities held in various lock pools and natural lakes, no water from the Murray is stored within South Australia for irrigation purposes. In addition to irrigation from the River Murray there are considerable areas irrigated from underground sources.

Adelaide Metropolitan Water Supply

In 1989–90, River Murray pipelines supplied 23 per cent of the total intake to the Metropolitan Adelaide Water Supply System, compared to 36 per cent for the previous year. The principal sources of supply for the nine storages in the Mount Lofty Ranges are the Rivers Onkaparinga, Torrens, South Para, Myponga and Little Para. Total metropolitan consumption was 194,249 ML.

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 Tailem Bend–Keith pipelines which provide River Murray water to extensive country areas. Surface and underground resources have been developed to supply most country centres not covered by the larger schemes. Total country consumption was 70,668 ML.

River Murray

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. Several measures have been taken to reduce drainage water in excess of irrigation requirements. An investigation into the feasibility of replacing open channels with pipe in the remaining unrehabilitated government irrigation areas has been undertaken, to provide irrigators with a reliable and flexible water supply. An Irrigated Crop Management Service has been initiated by the Department of Agriculture to assist irrigators to improve water use efficiency 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, completed in 1984. In the same year, another salinity project, the Rufus River Groundwater Interception Scheme, was commissioned. This scheme involves intercepting 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.

The Murray–Darling Basin Commission is pursuing two main strategies to maintain and improve the quality of River Murray water and improve the management of associated lands. The first is Salinity and Drainage Strategy and secondly, the Natural Resources Management Strategy.

The Woolpunda Groundwater Interception Scheme is being constructed under the first of these strategies, to intercept extensive natural saline seepages to the river. Another scheme, sited in the Chowilla Creek area, is being reviewed within the context of a broader management plan for this environmentally important area. Schemes to mitigate irrigation induced salt loads at Waikerie, Loxton and several private irrigation areas are also being investigated as part of this strategy and any salinity impacts caused by developments in the upstream States are being accounted for.

Under the second of these strategies, nutrient loads from the irrigated swamps in the lower river are being estimated to gauge their importance and develop appropriate management measures. In addition, development controls administered under the Planning and Water Resources Acts reduce the risks and consequences of flooding, and of degradation of the river and floodplain.

Tasmania

Main purposes of water conservation and utilisation

Contrary to popular belief, Tasmania is heavily dependent on water conservation in maintaining reliable sources of supply for irrigation, stock and domestic requirements, and urban and industrial water supplies. This is due to an annual summer drought between January and March, when most run-of-the-river flows only support ordinary riparian needs or very limited irrigation and many smaller streams cease to flow.

The total surface water usage for domestic, industrial, and agricultural purposes in Tasmania is only 1 per cent of the potential exploitable yield, compared with a national figure of about 13 per cent. Despite this, economic, environmental and social constraints are beginning to restrict further development of the total yield for these purposes.

Excluding power generation storages, the total capacity of water conservation dams in the State is about 150 gigalitres, almost half of which is in on-farm dams.

There is widespread use of farm dams for irrigation which is needed to maintain overall production because of the summer drought and the lack of pasture and crop growth in the State's cold winters.

The vast majority of the State's water resources are used for power generation, based on a large, integrated system of water storages. This system also benefits other water users by enabling greatly increased regulation of many streams.

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. While the Board is responsible for bulk supplies in the Hobart area, the Commission exercises control over the use of the State's water resources and the Authority controls water supply to a number of northern municipalities.

The Division of Mines and Mineral Resources of the Department of Resources and Energy administers the development and use of the State's ground water resources.

The Hydro-Electric Commission controls most of the surface water resources in the higher rainfall areas of the State for power generation purposes, and jointly administers certain catchments with the Rivers and Water Supply Commission where other demands exist in addition to power generation.

The Rivers and Water Supply Commission and the former Mines Department have been amalgamated to form the Department of Resources and Energy.

Rivers and Water Supply Commission

The Commission is empowered by the *Water Act 1957* to take water in streams and lakes, or to issue others with licences to do so; licensing covers supply to specific industries as well as for irrigation. The Commission is concerned with drainage trusts' operations, river improvements, irrigation, stream gauging, its own regional water schemes and with assessing proposals for 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 near Orford. The North Esk

Regional Water Supply Scheme supplies industrial users at Bell Bay and municipalities on the eastern bank of the River Tamar. The West Tamar Water Supply serves 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.

Irrigation

The Rivers and Water Supply Commission is in charge of three major irrigation schemes, these being the Cressy–Longford Irrigation Scheme (opened in 1974), the South East Irrigation Scheme, Stage I (opened in 1986), both of which supply water via open channel, and the Winnaleah Irrigation Scheme which supplies water via pipelines.

Of the three schemes, Cressy–Longford is the largest (serving 88 properties) with 10,000 hectares being fit for irrigation. The Coal River Scheme is capable of serving 107 properties of which 3,800 hectares are fit for irrigation. The Winnaleah Scheme serves 1,500 hectares on 72 properties.

The majority of land irrigated in the State in 1986–87 was watered by private schemes either by pumping directly from unregulated streams or from on-farm storages. Pasture still predominates as the major crop irrigated but vegetables and other crops now constitute 33 per cent of the total area irrigated.

Northern Territory

Administration

Under the *Northern Territory Control of Waters Act 1981*, control of natural waters is vested in the Crown. 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 and who are required to provide the Government with information on bores drilled. 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. Legislative review is proceeding and it is expected that a new Water Act will replace the current statutes during 1990.

The Water Resources Division of the Power and Water Authority is responsible for the assessment, planning and management of surface and ground water resources throughout the Northern Territory. It carries out systematic stream gauging, the collection of data relating to the quantity and quality of surface and ground water, flood prevention and control, and waste disposal and baseline inventory. 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 and administers permits and licences under the Control of Waters Act.

Surface water

Hydrological investigations and data collection are undertaken across the Northern Territory and the data are published by the Water Resources Division. The program includes base stream gauging stations and pluviographs (automatic rainfall recorders).

Groundwater

For information on Northern Territory ground water (and surface water) resources see the Northern Territory Department of Mines and Energy's publication *Water Northern*

Territory—Volume 1, the Department of Resources and Energy's publications *Australia's Groundwater Resources, 1983* and the Australian Water Resources Council's publication *1985 Review of Australia's Water Resources and Water Use.*

Of approximately 21,824 bores and wells registered in the Territory to 30 June 1990, 24.7 per cent were for pastoral use, 14.9 per cent were investigation bores, 31.7 per cent served urban and domestic supplies, 5.2 per cent were for agriculture, 17 per cent were used for mining and the remaining 6.5 per cent for various other uses.

Water supplies

The largest water conservation projects in the Territory are the Darwin River Dam (259.0 gigalitres) and the Manton Dam (15.7 gigalitres) which both serve Darwin with a reticulated water supply. Ground water 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 ground water.

Irrigation in the Territory is expanding, but is not extensive, being confined to 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

Administration

The provisions of the *ACT Electricity and Water Act 1988* give responsibility for the supply of water to the Territory to the ACT Electricity and Water Authority (ACTEW), a statutory authority established on 1 July 1988. ACTEW also provides the bulk water supply to Queanbeyan.

Surface water

Surface water storages supplying the ACT (population about 277,900) and the city of Queanbeyan (population about 20,500) 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 ACT, the storages being Corin Dam (75.5 gigalitres), Bendora Dam (10.7 gigalitres) and Cotter Dam (4.7 gigalitres). 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 (125.0 gigalitres).

The existing storages on the Cotter and Queanbeyan Rivers have an ultimate combined capacity to serve 401,000 persons. The remaining water resource within the ACT is the Gudgenby River which is at present not utilised but has the potential to serve approximately 200,000 persons.

A network of stream gauging stations in the ACT (run by ACT Electricity and Water) monitors surface water resources. A number of these gauging stations are provided with telemeters to provide a flood warning system in association with the Bureau of Meteorology.

Groundwater

Groundwater in the ACT 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 ACT have yields ranging between about 0.4 and 20 KL per hour; 3 KL 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 ACT, and because of the rapid expansion of urban growth. The Bureau of Mineral Resources has provided a bore-siting, ground water-quality and yield-prediction service in and around the ACT since the early 1950s and has maintained a network of observation bores which have been monitored regularly.

The Bureau of Mineral Resources provides technical advice to landholders and drilling contractors on groundwater and, occasionally, on runoff.

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THE COLLECTION AND PRESERVATION OF AUSTRALIA'S DOCUMENTARY HERITAGE

(This special article has been contributed by John Thompson, Director of Australian Collections and Services, from the National Library of Australia)

In Australia, the collecting and preservation of the paper-based documentary heritage of the country is a responsibility shared by a number of institutions, such as national, state, tertiary and local libraries. It also rests with a range of archival agencies such as the Australian Archives located in Canberra which has regional offices in each State and Territory, and State archives which have been set up and are maintained by each State Government. In addition, over recent years there has been an expansion of archival activity in the private sector as various corporations (particularly those operating in the mining and banking industries) have set up archival agencies of their own, both to manage current records and to care for older material which has accumulated over long periods of time.

The proliferation of collecting institutions of various kinds which has occurred in recent years is a reflection of two key factors. First, Australians have come to place importance on documenting and researching their national heritage. Secondly, with the establishment of the Australian Society of Archivists Incorporated (ASAI) and the setting up of accredited courses of study to supply the archival profession, there has developed since the 1970s a strong sense of professional purpose and identity amongst archivists. This new professionalism has worked to raise standards of practice within a range of archival agencies and has contributed to a higher level of awareness within the community of the importance of the paper-based materials which form a key part of our national documentary heritage. Archival management, as a distinct professional occupation, has become as important and as necessary a community task as librarianship, art and museum curatorship or the management and interpretation of historic buildings and natural history sites.

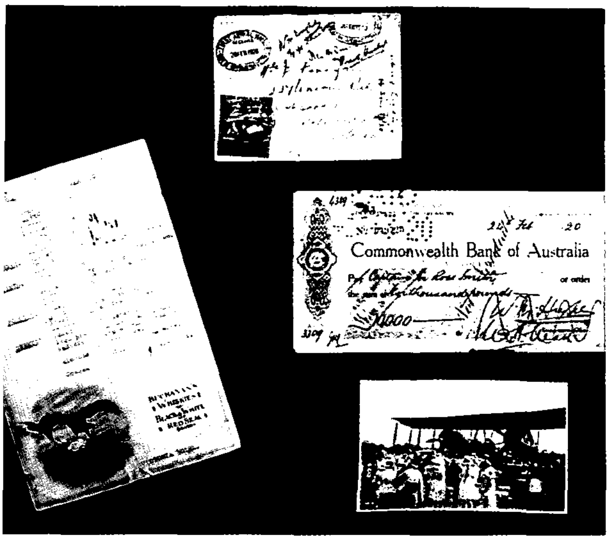
In 1983, the ASAI published under the title 'Our Heritage' (Canberra, 1983) a directory of archives and manuscript repositories in Australia. That directory lists 187 repositories of archives and manuscripts as against 51 repositories which had been identified and listed in a 1969 directory. Almost certainly, the number of institutions has again increased as new collecting needs or specialisations have emerged.

In comprehending the nature of archival and manuscript materials, it is important to draw a distinction between these two categories of records. The ASAI has provided the following definition of archives:

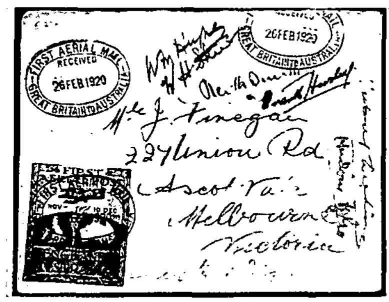
> Archives are those records which have been selected for permanent preservation, as a result of their administrative, financial, legal or research and information value. They are selected from amongst those records which are no longer required for the conduct of current activities. Archives are not necessarily 'old' records. Once a record is no longer required for frequent reference it is ready for consideration as an archive, even if it was created only a few days, weeks or months ago.

The other key criterion in defining archival material is that the records are written documents and other media of recorded information which are created in the course of the activities of a government or semi-government agency, a private organisation or an individual. But while the term archives thus applied has a generic character, it should be noted that a certain distinction may be applied to other kinds of records such as single documents or artificial collections of documents assembled by individuals or institutions,

Notebook, chronometer and magnifying glass of William Bligh. Photo courtesy National Library of Australia.

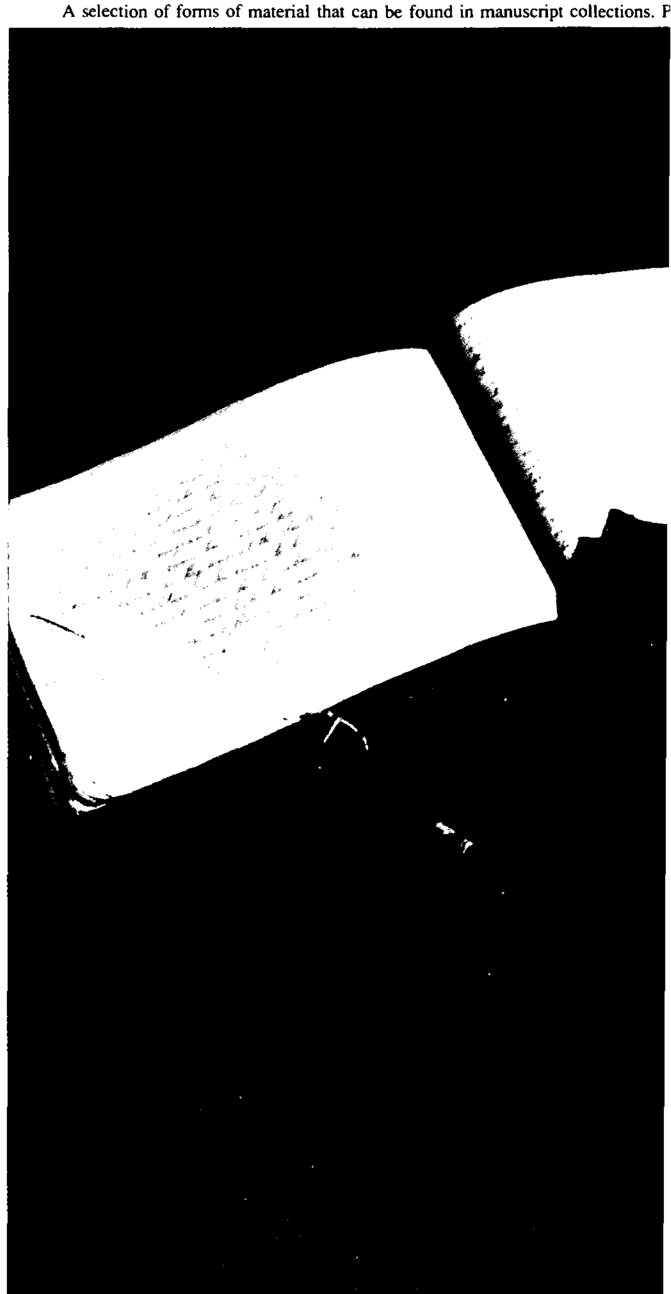


Records relating to the first England to Australia Air Race (Crome Collection, National
Photo courtesy National Library of Australia.



Letter carried aboard Keith and Ross Smith's plane in the first England to Australia Air Race (Crome Collection, National Library of Australia). Photo courtesy National Library of Australia.

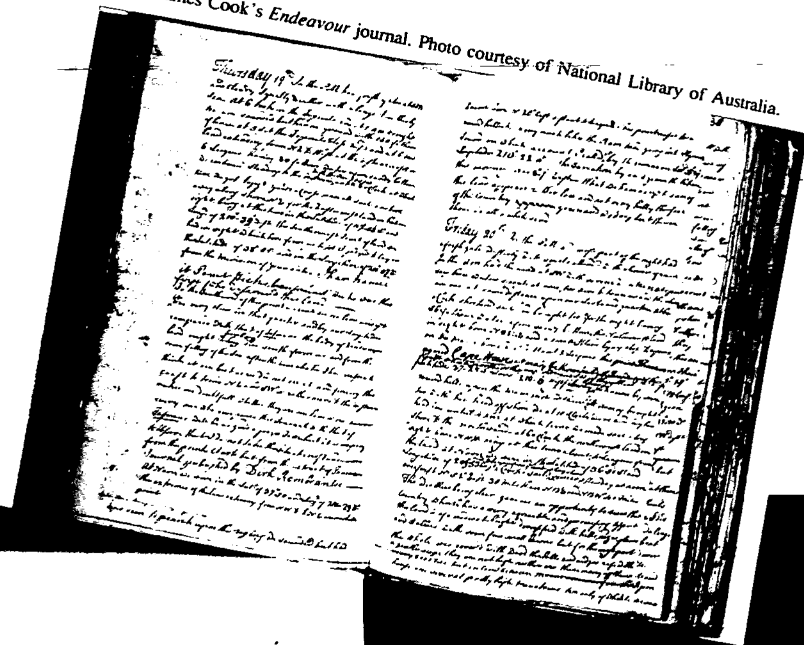
A selection of forms of material that can be found in manuscript collections. P



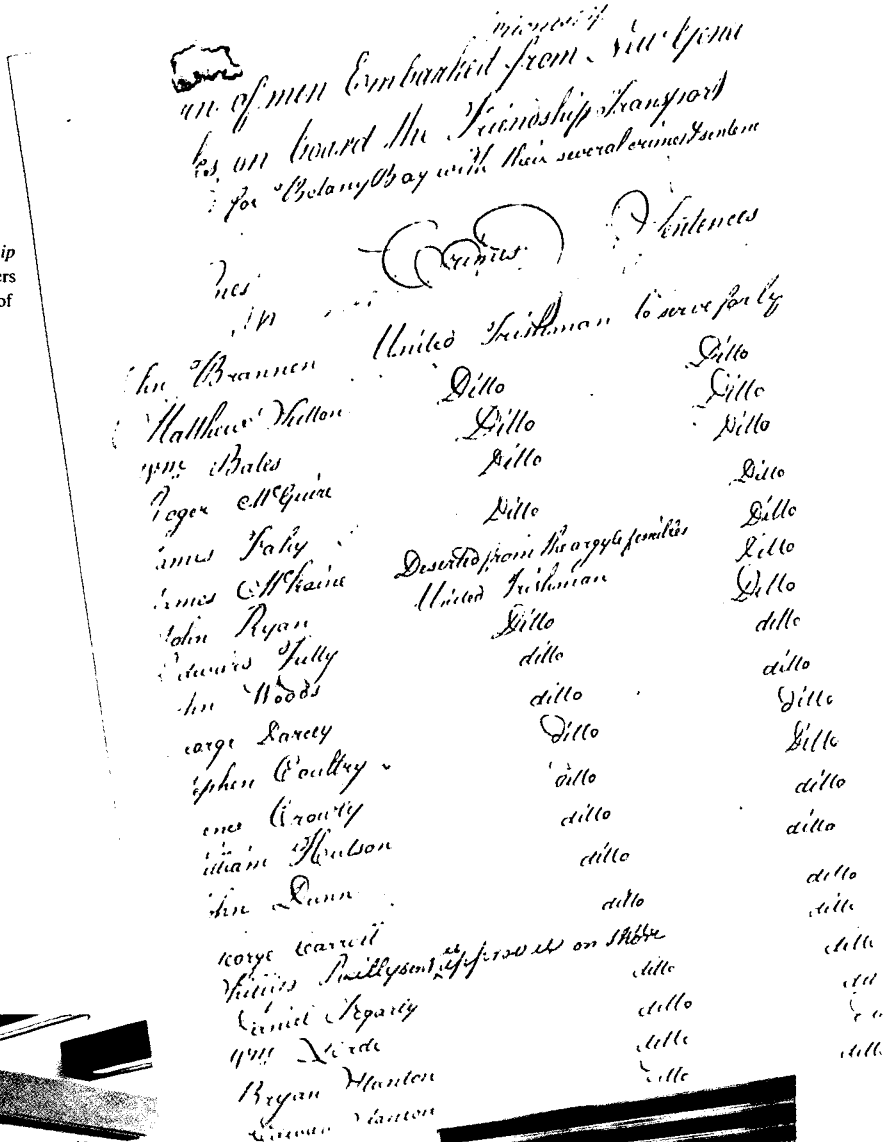
of Australia).

ourtesy of National Library of Australia.

Captain James Cook's *Endeavour* journal. Photo courtesy of National Library of Australia.



Indent of the convict ship *Friendship* which carried Irish political prisoners to Australia, 1799. Photo courtesy of National Library of Australia.



...of men Embarked from ... on board the Friendship Transport for Botany Bay with their several crimes & sentences

	Crimes	Sentences
...n	United Irishman	to serve for Life
...n Brannen	Ditto	Ditto
Matthew Whelon	Ditto	Ditto
...m Bates	Ditto	Ditto
Roger McGuire	Ditto	Ditto
James Fahy	Deserted from the Argyle fencibles	Ditto
James McKaine	United Irishman	Ditto
John Ryan	Ditto	ditto
Edward Tully	ditto	ditto
...n Woods	ditto	Ditto
George Larcey	Ditto	Ditto
Stephen Coultry	ditto	ditto
...es Crowly	ditto	ditto
William Hudson	ditto	ditto
...n Dunn	ditto	ditto
George Carroll		ditto
...	... on shore	ditto
Daniel Fogarty	ditto	ditto
Wm ...	ditto	ditto
Bryan Hanlon	ditto	
... Hanlon		

Manuscript Reading Room, National Library of Australia. Photo courtesy of National Library of Australia.

each item having intrinsic historical or aesthetic significance. Such material is generally identified, particularly within libraries both in Australia and overseas, as manuscripts.

In Australia, the tradition of acquiring and preserving documentary material for retention in public collections extends back to the nineteenth century. In 1867 the Public (now State) Library of South Australia purchased a group of documents relating to the early history of the colony. The records of the Burke and Wills Expedition were acquired in 1874 by the Public (now State) Library of Victoria, while in 1884 the Government of New South Wales purchased in England a quantity of the Australian papers of the great eighteenth century botanist Sir Joseph Banks. These papers were placed in what was then called the Free Public Library in Sydney, the forerunner of the present-day State Library of New South Wales.

The collecting and preservation of such materials tended during these years to be ad hoc and lacking in any systematic or coherent purpose. The overall approach of most Australian libraries during the nineteenth century and, indeed, well into the twentieth, was largely passive. It was left to a few private individuals to build up interesting collections of documents and records. The best-known of these collectors was David Scott Mitchell who, during a period of almost forty years, accumulated a remarkable collection of Australiana which formed the nucleus of the now world-famous Mitchell Library at the State Library of New South Wales in Sydney. Mitchell assembled what has been described as 'the most comprehensive collection of early Australian manuscripts'. His collection provided a rich base upon which, with the help of a generous financial endowment left at the time of his death, has been handsomely built upon by a succession of librarians right up until the present day. The Mitchell Collection today comprises the personal papers of many individuals who played a prominent part in the foundation, settlement and development of New South Wales as well as men and women who have been prominent in political, social, cultural, literary and artistic life at both a state and national level.

For a long period, the Mitchell Library dominated the collecting field in Australia. Indeed, it was not until the 1950s that the collecting environment began to change with the emergence of distinct Australiana departments in a number of state libraries such as the J.S. Battye Library of West Australian History in 1956 and the La Trobe Library in the State Library of Victoria in 1965. Prior to this period, the Commonwealth National Library, the forerunner to the present-day National Library of Australia, had begun to acquire some important documentary material, including, in 1923, the *Endeavour* Journal (1768–1771) of Captain James Cook R.N., and, in the following decade, the first of a number of collections of prime ministerial papers. The National Library has gone on to develop an outstanding collection of papers of prominent Australian men and women across a wide range of national endeavour and achievement. Today it is one of the leading custodians of private papers and archival material and is a major centre for research based on these and other collections of Australian material. For much of the early twentieth century period, historical societies were also active collectors of historical records, sometimes more so than the established libraries.

The provision for the preservation of archival records of governments remained poor for many years largely as a result of an inadequate understanding of the distinction between archival principles and the practice of librarianship. The dominant tradition in Australia was for the management of archival records of government to be placed under library control, a situation which continued until the 1960s. Gradually new archival legislation began to be developed to provide separate and distinct charters to federal and state archival agencies. There is now almost universally a clear distinction in Australia between the work which is done by the national and state archival agencies and the various research libraries such as the National Library of Australia and the State Library of New South Wales which maintain collections of private or personal papers as well as records of private organisations, businesses or societies.

In addition to the work done by the major national and state archival agencies and the various state libraries, there has been another tradition of specialist collecting which has assumed a new vigour in recent years. This tradition began after the First World War when the Australian War Memorial began to acquire private diaries and letters as well as official records relating to Australia's participation in various wars. Since then, a plethora of other specialist record-collecting agencies has emerged, bodies such as the Australian Academy of Science, the Percy Grainger Museum in the University of Melbourne and the National Film and Sound Archive in Canberra. Within a number of Australian universities, various collecting specialisations have also been developed. Perhaps the best known of these is the University of Melbourne Archives which, since the 1950s, has built up an outstanding source of business and trade union records as well as collections of personal papers of men and women of achievement in a wide range of disciplines. Considerable strength in the field of business and trade union records is also maintained by the Archives of Business and Labour in the Australian National University in Canberra.

A number of Australian university libraries have developed a strong interest in acquiring and maintaining collections of literary manuscripts and personal papers of Australian writers. The Fryer Library in the University of Queensland is probably the best-known of these repositories but impressive work is now being done by the Library of the Australian Defence Force Academy in Canberra which has built up, in a remarkably short time, a strong collection of literary manuscripts and related records of younger Australian writers. The Baillieu Library in the University of Melbourne, the Reid Library in the University of Western Australia and the Barr Smith Library in the University of Adelaide have also acquired some important collections of literary and related papers.

Although traditionally most Australian libraries have built their collections by gift, there has emerged in recent years a greater emphasis on the purchase of material, largely in response to strong competition now evident between collecting institutions. Writers in particular have become conscious that their papers have a monetary value and are usually keen to capitalise on the willingness of libraries to pay for such material. A trend has emerged whereby writers will now seek to have their papers assessed by a number of institutions and then to accept the best financial offer. This is an issue of some concern as generally most purchases are made from funds made available to institutions through public appropriation.

A strong market has also developed for other kinds of records, particularly the papers and related records of artists and painters which have attracted the interest of some wealthy private collectors. Several antiquarian book sellers in Australia have also developed an interest in the manuscript trade and this has further added to the difficulties faced by public sector libraries in finding the funds to pay for increasingly high-priced collections. The Commonwealth Government's Taxation Incentives for the Arts Scheme established in 1978 has provided some relief since it offers taxation benefits to donors of material to accredited collecting institutions. Paradoxically, however, the Scheme has also served to set by definition a commercial framework against which almost all manuscript and archival collecting activity is now set.

Other forms of documentary material are also collected by a range of public institutions in Australia. Map materials will be found in several different kinds of collections although the main collections of printed maps have been developed in libraries. The most important of these is located in the National Library of Australia in Canberra though strong collections have also been built up in the State Libraries of New South Wales and Victoria and in the Baillieu Library in the University of Melbourne. Each of these institutions places a strong emphasis on Australian materials of both historical and current interest. Pictorial materials, especially photographs, are collected in most of the large public sector libraries though it should be noted that photographs will also form integral parts of larger collections of manuscript and archival records. Philatelic materials are widely but not systematically distributed amongst several different kinds of collecting institutions. Important collections are held by the National Library of Australia, the State Library of New South Wales and the Powerhouse Museum in Sydney. More recently, Australia Post has established its own museum to serve as a comprehensive repository of Australia's philatelic history.

In the three years leading up to the Australian bicentenary celebrations in 1988, the Australian Bicentennial Authority conducted the Historic Records Search, a project designed to locate, identify and record documentary material of historic importance preserved in private ownership. Over 3,000 collections of major importance were located during this Search. A full listing and description of these records was prepared and has recently been published in microfiche format by the National Library of Australia which has also undertaken responsibility for the maintenance of the register. The records may also be accessed on line through the OZLINE database available through the National Library of Australia.

Preservation of cultural and heritage materials has now become an important part of the management agenda for custodial institutions. Over the past twenty years there has been a substantial investment made by the major archives and libraries in high quality conservation facilities and in the appointment of expert staff, now largely recruited from training programs available in Australia. While substantial backlogs of material remain to be treated, Australia has achieved remarkable progress in a short time in the conservation management of its heritage collections. A greater financial investment is still required if fragile materials are to be secured for the benefit of future generations. Valuable work is being done by conservators working cooperatively across institutional boundaries to set appropriate preservation standards and agreed priorities for the treatment of these materials.

A number of professional societies and associations are also active in the field both to raise the standards of professional practice and to serve as lobby groups to achieve a higher level of political support for the specialised work which is required to preserve Australia's documentary heritage. Such bodies include the Australian Council of Archives, the Australian Council for Library and Information Services, the Australian Library and Information Association, the Institute for the Conservation of Cultural Materials and the Museums Association of Australia.

Australia has a strong and interesting record of achievement in the preservation and management of its documentary heritage. A wide-range of institutions has emerged, especially since the 1960s to achieve a more substantial collecting effort over a wide spectrum. Greater coordination of this effort could be achieved through cooperative programs to identify and list holdings and to establish more effective control over collections as well as to improve community access. There are signs, however, that such cooperative efforts are now being explored and it may be expected that with the assistance of a national computer network, control of, and access to, the documentary heritage of Australia will be greatly enhanced as the country moves towards the celebration of the centenary of Australian federation in 2001.

17

ENERGY

Energy is fundamental to Australia's standard of living and economic performance. It has an important role to play in restructuring Australia's economy and improving its competitiveness.

The Commonwealth Government has an important involvement in the activities of the energy sector through its responsibility for the overall national interest, including the management of the national economy and the equitable distribution of national income. Its responsibilities for export policy and offshore petroleum activities have a major impact on specific development projects.

As well as ensuring energy policies are consistent with major economic, industry and social policy objectives, the key objective of the Commonwealth's energy policy is the promotion of an efficient, competitive and dynamic energy sector in the context of appropriate environmental considerations and a reasonable return to the community for the use of these resources.

In 1988 Australia completed an energy policy review, examining its current energy situation and what the future holds for it. The review began with a series of discussion papers and a conference, culminating with the publication of 'Energy 2000—A National Energy Policy Paper'.

The review highlighted three major energy policy objectives:

- to ensure that Australia's energy supplies are adequate and reliable. This does not mean setting rigid self-sufficiency targets and planning their achievement, but simply ensuring the availability of a diverse range of energy supplies on a commercial basis and at acceptable prices to meet our varied and changing needs;
- to achieve the most efficient and competitive domestic energy supply industry in order to minimise domestic costs and so sustain internationally competitive industrial sectors, and to contribute to rising standards; and
- to maximise the export earnings of Australia's energy resources consistent with a need to meet overseas requirements for cost competitive energy resources and with environmental and other social objectives.

Australia is generally well placed to meet these objectives by the year 2000.

Australia has abundant reserves of coal, gas and uranium to meet both export and domestic demands. Given currently known resources, it can continue current production rates in these energy sources for 360 years (black coal only), 55 years, and 120 years respectively. In fact Australia is one of only five Organisation for Economic Co-operation and Development (OECD) countries that are net energy exporters. Australia is:

- the world's largest exporter of coal, accounting for around one-third of the world seaborne coal trade;

- a major uranium producer and exporter, accounting for about 10 per cent of western world production and a greater percentage of its uranium trade; and
- currently an exporter of Liquid Petroleum Gas (LPG) and petroleum products, and a major exporter of Liquefied Natural Gas (LNG).

Estimates of Australia's demonstrated economically recoverable resources of energy as at 30 June 1989 were:

Black Coal	50 gigatonnes
Brown Coal	42 gigatonnes
Natural Gas	1,069 TL
Uranium	474 kilotonnes U
Crude Oil, Gas Condensate and LPG	462 gigalitres

There is one area however, where Australia will rely more on the international market as an importer—crude oil. There is likely to be an increasing disparity between domestic oil supplies and use. This will largely be the result of a marked decline in the production of crude oil from Bass Strait, Australia's main existing production area.

In line with trends in recent years, conservation and greater efficiency in oil use, and the switch to alternative energy sources prompted by the instability and uncertainty surrounding international oil supplies should see oil's share in Australia's total energy demand falling slightly from 39 per cent to 36 per cent in the year 2000.

Advice and Coordination

Institutional arrangements

The Commonwealth Minister for Primary Industries and Energy has portfolio responsibility for national energy policy matters, including the commercial development of hydrocarbon fuels and minerals.

The Department of Primary Industries 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 Energy Consultative Council (NECC), the National Oil Supplies Advisory Committee (NOSAC), the National Petroleum Advisory Committee (NPAC), the National Fuels Emergency Consultative Committee (NFECC), the Australian Coal Marketing and Technology Council (ACMTC), and the Consultative Committee on Safety in the Offshore Petroleum Industry (COSOP).

It is also responsible for the implementation of action required from Australia's membership of the International Energy Agency (IEA) and for the national system of accounting for control of nuclear materials under Australia's Agreement with the International Atomic Energy Agency (IAEA).

International Energy Agency—IEA

The IEA was established in Paris in November 1974 as an autonomous institution within the framework of the OECD. 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 share remaining supplies in the event of a severe oil shortfall;
- develop alternative energy sources and the more efficient use of energy through cooperative research and development programs; and
- promote cooperative relations with other oil-producing and oil-consuming countries.

Australian Coal Marketing and Technology Council—ACMTC

The Australian Coal Marketing and Technology Council was established in 1988 to advise the Minister for Primary Industries and Energy on measures to enhance Australia's export trade in coal.

The Council's membership consists of a chairman, industry and union representatives, a commercial marketing expert, and a technical expert.

Research and Development

The Energy Research and Development Corporation (ERDC) was established on 2 July 1990 to assume responsibility for managing Commonwealth funding of research and development in the energy science and technology sector.

The Corporation assumes responsibility for the National Energy Research, Development and Demonstration (NERD&D) Program (except for coal research activity). To June 1990, $256 million had been committed under the NERD&D Program to some 1,500 research projects undertaken by government, industry and the universities.

In line with the Government's earlier announced policy in May 1989 of replacing existing advisory councils with R&D Corporation, the ERDC was established by regulation under the *Primary Industries and Energy Research and Development Act 1989*.

Deliberations relating to the establishment of a Coal R&D Corporation are continuing.

Additional Commonwealth support for energy research and development is provided through budget appropriations to Commonwealth agencies such as CSIRO, BMR and ANSTO, and through Commonwealth funding of all Australian universities. The Commonwealth also provides an incentive for research and development through the 150 per cent tax concession scheme and through the Grants for Industry Research and Development (GIRD) scheme.

Commonwealth Scientific and Industrial Research Organisation—CSIRO

Energy research within the Institute of Minerals, Energy and Construction is carried out with the objectives of increasing the international competitiveness, export earnings, gross domestic product and value of services provided by the energy industries. Divisions of the Institute engaged in energy research include Geomechanics, Fuel Technology, Coal Technology, Mineral Products, Mineral and Process Engineering and Building, Construction and Engineering.

Australian Minerals and Energy Council—AMEC

The Australian Minerals and Energy Council was established in April 1976 by agreement between State and Commonwealth Mines and Energy Ministers, replacing 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 coordinate 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 and working parties to undertake specific tasks and report back through its advisory committee as the need arises.

National Oil Supplies Advisory Committee—NOSAC

The National Oil Supplies Advisory Committee 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 about twice 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.

National Petroleum Advisory Committee—NPAC

Membership of NPAC is drawn from agricultural, general aviation, fishing, manufacturing, mining, oil, shipping and transport industries, the trade union movement and motorists' organisations, as well as the Commonwealth Government and the State and Territory Governments. The Department of Primary Industries 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.

National Fuels Emergency Consultative Committee—NFECC

The 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.

National Energy Consultative Council—NECC

The NECC was established in April 1988 following the recommendation of the Energy 2000 national energy policy review. The purpose of the NECC is to monitor and review the current energy situation and the energy outlook for Australia with particular reference to any major changes in trend away from the projections and positions outlined in the Energy 2000 review. Its purpose is to examine overall energy policy as well as the position of specific industry sectors. In addition it provides a forum for members of the Commonwealth Government on the current situation and outlook in particular energy industries and expected future developments.

Consultative Committee on Safety in the Offshore Petroleum Industry—COSOP

The COSOP was formed following the accident involving the Piper Alpha platform in the North Sea on 6 July 1988. The Committee's principal role is to review the findings of inquiries by the British Government into the Piper Alpha accident and their implications for Australian offshore operations.

The Committee consists of representatives from the major Australian offshore operators, State Governments with active offshore production programs, the trade union movement and the Commonwealth Government.

Resources

Black coal

Black coal is currently 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 the main centres of population.

Australia's inferred resources of black coal are very large, amounting to over 550 gigatonnes (Gt). At 30 June 1988, Australia's economically recoverable resources of black coal were estimated to total 50 Gt. They 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, while small deposits are being worked in Western Australia, South Australia and Tasmania. Australian saleable black coal production in 1988–89 was 149 Mt.

For further details relating to the production of black coal in Australia *see* Chapter 15, Mineral Industry. Details about the nature and age of black coal are given in *Year Book* No. 64.

Brown coal

Australia's measured and indicated resources of brown coal were estimated to be around 42 Gt at 30 June 1988. The main deposits are located in Victoria's Latrobe Valley (over 39 Gt). 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, and as far north as central Queensland. 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.

Petroleum

The level of offshore petroleum exploration activity in 1989 continued to rise compared to 1987 and 1988, and the outlook for 1990 is that this trend will continue. Onshore activity however, declined in 1989 due to the continued low level of world oil prices and the lack of any large discoveries in recent years. Onshore activity is likely to remain subdued in 1990.

The prospects of further discoveries of petroleum in Australia are considered to be good, particularly in sedimentary basins off the north-west coast. Consistent with the existing pattern of discoveries, undiscovered oil is likely to be of the light, low sulphur type and more gas fields than oil fields should be found. Assessments by the Bureau of Mineral Resources, Geology and Geophysics indicate that there is an average probability of finding at least another 380 gigalitres (GL) (2,400 million barrels) of crude oil in Australia. This compares with demonstrated economically recoverable resources of 252 GL (1,585 million barrels) and demonstrated sub-economically recoverable resources of 31 GL (195 million barrels) as at 30 June 1989.

PETROLEUM RESOURCES(a) AS AT 30 JUNE 1989
(*Source*: Department of Primary Industries and Energy)

Basin	*Crude oil*	*Gas condensate*	*LPG*	*Sales gas*
	GL	GL	GL	TL
Demonstrated economic*(b)*—				
Gippsland (Vic.)	172	23	47	195
Carnarvon (WA)	38	85	60	670
Cooper/Eromanga (SA/Qld)	12	7	10	73
Amadeus (NT) and Bonaparte (WA/NT)	29	6	11	84
Perth (WA)	1	—	—	5
Bowen/Surat (Qld)	—	—	—	3
Canning (WA)	—	—	—	—
Otway (Vic.)	—	—	—	*(c)*
Total	**252**	**121**	**128**	**1,030**

For footnotes *see* end of table.

PETROLEUM RESOURCES(a) AS AT 30 JUNE 1989—*continued*
(*Source*: **Department of Primary Industries and Energy)**

Basin	*Crude oil*	*Gas condensate*	*LPG*	*Sales gas*
	GL	GL	GL	TL
Demonstrated sub-economic*(d)*—				
Gippsland/Bass (Vic./Tas.)	15	10	—	38
Bonaparte (WA/NT)	4	1	4	81
Carnarvon (WA)	11	2	—	378
Cooper/Eromanga (SA/Qld)	—	3	5	36
Browse (WA)	—	32	23	489
Perth (WA)	—	—	—	—
Amadeus (NT)	—	—	—	10
Bowen/Surat/Adavale (Qld)	—	—	—	5
Bass (Tas./Vic.)	1	8	5	8
Otway (SA/Vic.)	—	—	—	6
Total*(e)*	**31**	**56**	**37**	**1,051**

(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 extrapolations on geological evidence. (c)* Gas resource very small. *(d)* 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. *(e)* Discrepancies between totals and sums of components are due to rounding.

Crude oil and condensate

Indigenous production in 1988–89 at 28,255 megalitres (486 thousand barrels per day) of crude oil and condensate was 9.6 per cent less than production in 1987–88 and 11 per cent less than the peak level of production achieved in 1985–86. Production of crude oil from the Bonaparte Basin has continued to grow since production started in 1986–87. In 1988–89, the Bonaparte Basin produced 2,430 megalitres of crude oil, nearly 10 per cent of the total indigenous oil production. Production of crude oil from the Gippsland Basin decreased by 19 per cent from the 1987–88 level, but that Basin still accounts for 70 per cent of total indigenous crude oil production. The North West Shelf was the major producer of condensate during 1988–89 with 42 per cent of indigenous production sourced in that region.

Export volumes of crude oil and condensate increased by 6.9 per cent in 1988–89 compared with 1987–88 to a new record of 6,904 megalitres. The main markets were the United States, Singapore and New Zealand. Imports of crude oil and condensate also increased to over 10,000 megalitres, the highest level since 1982–83.

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 in relation to other liquid fuels because LPG has to be refrigerated or pressurised when transported and stored. LPG is an alternative transport fuel for high mileage vehicles in urban areas as well as a petrochemical feedstock and a traditional fuel.

Identified economically recoverable resources of LPG at June 1988 of 97,000 megalitres (ML) are concentrated in Bass Strait, the North West Shelf and the Cooper Basin.

Production of naturally occurring LPG in Australia in 1988–89 was 3,763 ML. The major contributors to this total were the Bass Strait fields (2,689 ML or 71 per cent of total production) and the Cooper Basin (974 ML or 26 per cent of total production). About 58 per cent of domestic LPG production is exported (2,178 ML in 1988–89), mainly to

Japan. Domestic consumption of 2,472 ML in 1988–89 was met by 808 ML of product obtained from refineries, with supply shortfalls being met by naturally occurring product and import.

PETROLEUM PRODUCTION IN AUSTRALIA
(*Source:* Department of Primary Industries and Energy)

Year	*Crude oil and condensate*	*LPG(a)*	*Natural gas*
	ML	ML	GL
1982–83	22,069	2,909	11,654
1983–84	26,828	3,132	12,097
1984–85	30,956	3,864	12,963
1985–86	31,734	4,016	14,278
1986–87	31,503	3,927	14,683
1987–88	31,264	3,923	15,249

(a) Naturally occurring.

Natural gas

During 1988–89, 15,772 million cubic metres of natural gas was produced for domestic consumption. This was 3.3 per cent more than in 1987–88. About 10,886 million cubic metres or 69 per cent of natural gas was sourced in the Cooper Basin. The North West Shelf contributed 3,905 million cubic metres or 25 per cent to the total.

North West Shelf Project

The North West Shelf natural gas project is the largest single resource development program ever undertaken in Australia. The project is estimated to have a total capital cost of $12 billion, excluding LNG tankers. 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 and the Pilbara. It comprises the North Rankin 'A' platform, a 134 kilometre 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 kilometre pipeline to service the domestic markets.

The second phase, the LNG export phase, currently estimated to cost $9.8 billion, includes onshore LNG plant ($3,500 million), two more offshore production platforms, further drilling and pipelines, site engineering and the provision of infrastructure and housing in Karratha. Seven 125,000 cubic metre LNG tankers (costing about $1.6 billion) will also be required.

The first LNG export shipment to Japan left Australia in July 1989, three months ahead of schedule. The project was formally inaugurated by the Prime Minister on 19 September 1989.

LNG exports to Japan take place under a twenty year contract. LNG exports to Japan in 1989–90 will total 2.1 million tonnes, rising to nearly 6 million tonnes by 1994. It is expected that the project will generate some $41 billion in revenue in dollars of the day terms. North West Shelf gas is sold to five electricity and three gas utilities in Japan, which will supply a combined market of some 90 million people.

On 4 April 1989, it was announced that development of the Goodwyn 'A' field would proceed at an estimated cost of $1.6 billion. The Goodwyn field will supplement North Rankin gas production in order to meet the North West Shelf Project's contractual commitments for the sale of natural gas to the State Energy Commission of Western Australia and LNG to the Japanese buyers.

The National Liaison Group (NLG) on the North West Shelf was 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 Government and the State Governments, trade unions and industry associations together with the JVP. The Commonwealth Minister for Resources is joint chairman with the Western Australian Minister for Minerals and Energy. The aim of the NLG is to maximise Australian content provided cost, quality and performance criteria are met. 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.

Oil shale

A description of the nature and location of Australian oil shale deposits was given in *Year Book* No. 67.

Major investigations into oil shale development have concentrated on the Condor, Rundle and Stuart deposits.

Uranium

Australia has about 31 per cent of the Western world's low-cost uranium reserves. Deposits occur in the Northern Territory, Western Australia, South Australia and Queensland.

Australia's reasonably assured uranium resources, at December 1989, totalled 474,000 tonnes of uranium recoverable at less than $US80 per kg U.

The Australian Government's uranium policy provides that the mining and export of uranium will continue from only the Ranger and Nabarlek mines in the Northern Territory and the Olympic Dam mine in South Australia.

Commercial production at the Ranger mine commenced in 1981. Production capacity of the mill is 3,800 tonnes U_3O_8 per annum and production for 1989 totalled 3,290 tonnes U_3O_8. The Nabarlek deposit was mined in 1979 and the ore was stockpiled for later treatment. Production ceased in 1988 and the mill is currently being held on a care and maintenance program. Exploration is continuing with a view to establishing further resources.

The Olympic Dam mine commenced commercial production of uranium in August 1988. Production capacity of the mill is 1,900 tonnes U_3O_8 per annum and production for 1989 totalled 1,021 tonnes U_3O_8. The mine also produces copper, gold and silver.

All exports of Australian uranium are subject to the most stringent safeguards which provide assurance that none of the material is diverted from peaceful uses. Uranium produced in Australia is exported in the form of yellowcake for use in nuclear reactors for the generation of electricity and research and development pursuant to that purpose.

Production of uranium for 1989 was 4,311 tonnes U_3O_8 and exports were 4,435 tonnes U_3O_8 valued at around $351 million. The *Nuclear Non-Proliferation (Safeguards) Act 1987* gives domestic effect to Australia's international nuclear non-proliferation obligations which require domestic legislation. The legislation establishes a system of permits for the possession and transport of nuclear material (defined to cover uranium, thorium and plutonium), and other physical items such as equipment and material used in nuclear reactors. The permit and related provisions also deal with the possession and communication of sensitive information about nuclear technology, in circumstances where that information is not already a matter of public record. The legislation is administered by the Australian Safeguards Office.

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.

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 presently supplies about 65 per cent of the world's traded monazite. Exports from Australia of thorium and thorium-containing ores require the approval of the Minister for Primary Industries and Energy under the Customs (Prohibited Exports) Regulations.

Solar energy

For specific applications such as domestic water and space heating, solar energy is already beginning to play a valuable role in Australia. Some six per cent of Australian residences have a domestic solar water heater with the local industry currently producing around 30,000 units annually. The use of passive solar design principles in housing is also increasing as low-cost passive designs are developed. The best prospects for using many solar energy technologies are in areas of Australia remote from the major electricity grids, where electricity costs can be anywhere from 3 to 20 times those in metropolitan areas.

Wind energy

While the bulk of Australia's inland has relatively low wind speeds, some coastal and island localities have good 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 turbine generators for remote areas. It is unlikely that, in the short to medium term, wind energy will be able to compete on a widespread and large scale basis with coal for electricity generation in Australia. However, wind turbines could find increasing application in remote areas where wind resources are favourable and which currently rely on diesel fuel for electricity production.

Geothermal energy

The most intensive and well-documented study in Australia of subsurface temperatures has been made using bore holes in the Great Artesian Basin. However, of the total number of indexed bores, only a very small proportion have water temperatures exceeding 100°C.

In general, it appears that cost constraints will largely restrict the use of our geothermal resources to the supply of hot water for space heating and light industrial purposes. However, for remote homesteads and communities in areas of the Great Artesian Basin, hot artesian bores may well be used to provide an economically viable alternative source of electricity to that obtained from diesel generators.

Biomass

Only two forms of biomass are used significantly as energy in Australia. These are firewood and bagasse, both converted to energy by direct combustion.

Approximately 6.0 megatonnes of firewood are currently used annually in Australia, equivalent in energy terms to about 94 petajoules, or 2.4 per cent of Australia's total energy consumption.

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 about 81 petajoules, or 2.1 per cent of Australia's total energy consumption.

Crude Oil Marketing and Pricing Arrangements

The crude oil market was deregulated on 1 January 1988. The new arrangements allowed refiners and producers to negotiate freely the quantities and prices of crude oil they buy and sell. Crude oil producers also have complete freedom to export crude oil as an alternative to selling on the domestic market, subject to Government policy in times of emergency. The Government no longer fixes an Import Parity Price nor requires refiners to absorb quantities of Australian oil at that price, as it did previously under the allocation system.

The free market has given refiners more flexibility in their selection of feedstocks leading to increased efficiency and a strengthening of their competitive position. Decisions on major refinery investment associated with changes in domestic crude availability have been easier in a deregulated market and a significant program of investment in upgraded plant and equipment has already been undertaken.

The price of crude oil used for the purposes of excise tax assessment for Bass Strait in a free market is the monthly volume weighted average of realised prices of sales of oil from Bass Strait.

Secondary tax arrangements in the petroleum industry

In addition to general taxation arrangements applying to companies in Australia, petroleum production projects are subject to secondary taxes. The type and rate of secondary taxation (resource rent tax, resource rent royalty, or excise and royalties) depends on the location of the petroleum resource, the date of discovery of the petroleum reservoir and the date upon which production commenced.

A *Resource Rent Tax* (RRT) applies to petroleum projects in the majority of Australia's offshore areas beyond the States' territorial seas. Excluded are the Bass Strait and North West Shelf production licence areas and associated exploration permits. Where RRT applies, it replaces excise and royalties which would otherwise have been levied.

A *Resource Rent Royalty* (RRR) may be applied to onshore petroleum projects by State Governments. Where RRR is applied the legislation provides for the Commonwealth to waive its crude oil excise whenever the relevant State Government negotiates an acceptable RRR agreement with the project producers and agrees to a satisfactory revenue sharing formula with the Commonwealth.

Excise applies to crude oil production from the Bass Strait and North West Shelf projects offshore and all onshore areas (except Barrow Island where a RRR applies). Excise also applies to certain LPG produced from offshore projects.

Crude oil excise is based on the annual level of crude oil sales from individual production areas and is levied as a percentage of the realised price received by producers.

Different excise scales are applicable to oil production depending upon the date of discovery of the production area and the date when the area was first developed. In the case of new offshore projects to which excise and royalty apply, and all onshore fields, the first 30 million barrels of crude oil production are exempt from excise. Production beyond this level is subject to the appropriate excise rate.

Oil discovered before 18 September 1975 ('old' oil) attracts a higher rate of excise than oil discovered on or after this date ('new' oil). An 'intermediate' scale also applies to oil produced from 'old' oil fields that were not developed as of 23 October 1984. However, in the case of all onshore fields that commenced production after 1 July 1987, production in excess of 30 million barrels is subject to 'new' oil excise.

A *Commonwealth Royalty* is also levied on offshore petroleum production except in the case where RRT applies. Proceeds are shared, generally on a 32:68 basis by the Commonwealth and the appropriate State or Territory. Thus, Victoria receives a share of the royalty from petroleum produced from Bass Strait, and Western Australia receives a share of the royalties from the North West Shelf. Onshore petroleum rights are vested in the State and Northern Territory Governments and the Commonwealth does not in general receive a share of this royalty.

Incentives to encourage petroleum exploration and development

Apart from the deregulation of crude oil marketing from 1 January 1988 and the concessions to the crude oil excise regime, the Government has introduced a number of other policy initiatives to encourage petroleum exploration and development in Australia.

On 20 January 1988, the Treasurer announced that Australian participation guidelines for foreign investment policy in respect of new oil and gas development proposals involving total investment of over $10 million will no longer apply. These projects will be allowed to proceed unless judged contrary to the national interest.

On 25 May 1988, in the May Economic Statement the Treasurer announced that the company tax rate would be reduced from 49 per cent to 39 per cent from 1 July 1988. The immediate 100 per cent deductibility of exploration expenditure against company tax has been retained, as has the write-off over 10 or 20 years in equal instalments of expenditure on infrastructure such as pipelines. The general level of tariffs on imports is to be reduced to 10 per cent and 15 per cent over the next four years depending on the tariff category of the equipment. Further, the two per cent revenue duty on imports of post wellhead items is being abolished.

The Government continues to release offshore petroleum exploration acreage regularly, usually twice a year. The latest release was made on 2 August 1989 and offered 12 offshore areas in the Western Australian, Tasmanian and Queensland Adjacent Areas.

Pricing of liquified petroleum gas—LPG

Following a major review of LPG pricing arrangements in Australia, it was decided that the Government, as of 1 February 1989, would no longer set the price of LPG on the Australian market. This decision represents an important move towards a free market in LPG and brings LPG into the same pricing arena as other major petroleum products. The Prices Surveillance Authority (PSA) now has responsibility for determining the maximum wholesale price of LPG in each capital city.

Reticulated Energy

Electricity and gas establishments in Australia

The census of electricity and gas industries covers distribution as well as production and is conducted as a component of the Australian Bureau of Statistics' 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 for the mining, manufacturing, retail and wholesale trade, construction, transport and selected services industries.

The following table shows a summary of operations of electricity and gas establishments for 1986–87. Further details are available in the publication *Electricity and Gas Establishments: Details of Operations, Australia 1986–87* (8208.0).

ELECTRICITY AND GAS ESTABLISHMENTS: SUMMARY OF OPERATIONS, 1986–87

		Establishments at 30 June (No.)	Employment at 30 June Males (No.)	Females (No.)	Persons (No.)	Wages and salaries ($m)	Turnover ($m)	Stocks Opening ($m)	Closing ($m)	Purchases, transfers in and selected expenses ($m)	Value added ($m)
ELECTRICITY											
New South Wales		29	26,596	3,004	29,600	792.0	5,097.3	399.2	508.9	3,003.0	2,204.0
Victoria		14	19,036	1,800	20,836	579.4	2,345.4	69.5	79.6	1,119.7	1,235.8
Queensland		12	9,374	1,355	10,729	327.6	2,335.0	149.3	211.9	1,471.9	925.7
Other States and Territories*(a)*		19	15,869	1,560	17,429	480.3	2,263.8	159.4	196.6	790.2	1,510.8
Australia—	**1986–87**	**74**	**70,875**	**7,719**	**78,594**	**2,179.3**	**12,041.4**	**777.4**	**997.0**	**6,384.8**	**5,876.3**
	1984–85	83	75,153	7,458	82,611	2,000.8	10,154.4	714.5	631.2	5,214.8	4,856.3
	1983–84	82	75,362	7,275	82,637	1,823.6	9,342.0	696.4	713.5	4,642.5	4,716.5
	1982–83	85	75,209	7,299	82,328	1,689.6	8,343.3	530.6	693.2	4,313.6	4,192.3
GAS											
New South Wales		20	2,367	532	2,899	69.8	448.3	22.7	22.9	278.4	170.1
Queensland		8	640	136	776	17.0	132.8	8.0	6.8	68.5	63.0
Other States and Territories*(b)*		6	6,253	1,179	7,432	187.2	1,404.8	39.2	39.4	596.1	808.8
Australia—	**1986–87**	**34**	**9,260**	**1,847**	**11,107**	**274.0**	**1,985.8**	**69.9**	**69.1**	**943.0**	**1,042.0**
	1984–85	34	8,788	1,729	10,517	229.4	1,655.2	71.8	70.0	828.5	825.0
	1983–84	34	8,909	1,635	10,544	217.9	1,386.4	72.9	72.0	633.6	752.0
	1982–83	37	9,013	1,571	10,584	206.4	1,158.1	58.7	72.1	545.5	626.0

(a) The number of electricity establishments operating at 30 June 1987 for these States/Territories were: South Australia–9; Western Australia–6; Tasmania–1; Northern Territory–2; and Australian Capital Territory–1. *(b)* The number of gas establishments operating at 30 June 1987 for these States/Territories were: Victoria–1; South Australia–2; Western Australia–1; Tasmania–1; Northern Territory– nil; and Australian Capital Territory–1.

Electricity

At 30 June 1989, the total installed public electric generating capacity in Australia was 34.9 million kilowatts.

Of total public electrical energy produced during 1988–89 hydro-electric sources provided approximately 12 per cent, and the balance was supplied by fossil fuels with approximately 80 per cent provided by coal. The development of coal-fired power stations has been facilitated by the presence of large demonstrated economic resources of coal close to the major industrial areas in New South Wales and Victoria.

About 90 per cent of electric power in Australia is produced by power stations owned and operated by State Government utilities.

Snowy Mountains Hydro-Electric Scheme

The Commonwealth Government's major direct role in the electricity supply industry is its responsibility for the Snowy Mountains Scheme. It is a dual purpose complex which supplies water for electricity generation and irrigation. Located in south-eastern Australia, on its completion the Scheme 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 and 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 appeared in the Energy Chapter of *Year Book* No. 70.

New South Wales

Department of Minerals and Energy

On 19 October 1988, the Department of Minerals and Energy was established by the amalgamation of the Department of Mineral Resources and the Department of Energy. The aim of the Department of Minerals and Energy is to promote the responsible development, management and utilisation of the energy resources of New South Wales.

The *Energy Administration Act 1987* confers broad powers on the Department to secure the best management of the supply and use of energy in New South Wales. This involves oversighting the planning of additional electricity supply capacity and of the supply and distribution of electricity, gas and petroleum products. The Department also promotes the efficient and safe use of energy in business, transport and residential sectors.

Electricity Commission of New South Wales

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 principal generating authority, it is also responsible for the development of major 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 1989, there were 27 retail supply authorities, mainly county councils, throughout the State.

Of the State's electrical power requirements during the year ended 30 June 1989, almost all was generated in New South Wales. Over 93 per cent was produced by the six major thermal power stations, with the balance from the Snowy Mountains Hydro-Electric Authority, other hydro-electric stations, and interchange with other States.

At 30 June 1989, the major power stations of the Electricity Commission of New South Wales State system and their effective capacities were as follows: Bayswater (Hunter Valley) 2,640 MW; Liddell (Hunter Valley) 1,860 MW; Munmorah (Tuggerah Lakes) 1,200 MW; Vales Point (Lake Macquarie) 1,880 MW; Eraring (Lake Macquarie) 2,640 MW; and Wallerawang (near Lithgow) 920 MW. The total nominal capacity of the Electricity Commission's system as at 30 June 1989 was 11,950 MW. The greater part of the Commission's generating plant is concentrated within a 185 km radius of Sydney. The maximum demand for electricity from the Commission's system during 1988–89 was 8,943 MW.

Two 660 MW units are being installed at Mount Piper Power Station which is located on the western coalfield near Lithgow. Commissioning of the Mount Piper station is planned to commence in 1993.

Hydro-electricity

The greater part of the hydro-electric potential of New South Wales is concentrated in the Snowy Mountains area, which is controlled by the Snowy Mountains Hydro-Electricity Authority. 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.

Gas reticulation

Natural gas (NG) was made available to Sydney consumers with the completion of an overland supply pipeline from the Moomba field in South Australia in 1976. Interconnection of the New South Wales and Victorian power systems with that of South

Australia was completed in December 1989 and commercial operation began in March 1990.

With the connection of natural gas pipelines into existing reticulation systems, the use of gas manufactured from coal or petroleum has been entirely superseded in the main population centres of the State, with Sydney homes connected to reticulated gas supply converted to the direct use of natural gas by June 1990.

A smaller number of regional centres not yet connected to the natural gas distribution network still retain their own manufactured gas production and reticulation systems. These systems are operated either by local government or by commercial interests. However, together they account for less than 3 per cent of total sales in New South Wales.

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 1988–89 its revenue was $2,404.7 million. At 30 June 1989, it had total fixed assets of $8,685 million and a staff of 21,551.

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 coordinated the generation, purchase and supply of electricity on a State-wide 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 1989, it distributed electricity directly to 1,555,000 customers and indirectly to a further 286,500 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

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 200,000 megatonnes, of which 52,000 are presently economically recoverable.

The coal is young and soft with a moisture content of 60 to 70 per cent and occurs in thick seams located 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 high moisture content would make the coal expensive to transport.

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). 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) and 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 1989 was 7,763 MW, including both capacity within the State and that available to it from New South Wales.

In 1988–89, electricity generated by the SEC in its thermal and hydro-electric power stations, or purchased, totalled 36,144 GWh.

Power station construction

The Loy Yang 'B' station, the second part of the project, has at this stage approved capacity of 1,000 MW in two units of 500 MW each. The first of these units is expected to be in full operation by mid 1993. Work is on schedule to achieve this date.

Transmission distribution—power grid

The Power Grid Group was formed during October 1988 to replace the Transmission Group. It has adopted the responsibility for design, construction, operation and maintenance of the transmission and sub-transmission systems. Main transmission is by 500, 330, 220 and 66 kV lines which supply the principal sub-transmission centres and interconnection between generating sources.

Three 500 kV transmission lines 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 Heywood Terminal Station located near Portland in the south-west of the State, provides the connection to existing 500 kV lines to the Portland Smelter and transformation to 275 kV for the connection of lines to South Australia. The Heywood Terminal Station was officially opened on 30 March 1990. The interconnection completes a three state power grid, one of the most extensive in the world and provides significant opportunities for the SECV in the future.

Gas reticulation

Created by the *Gas and Fuel Corporation Act 1950* as a public authority of the State, the Gas and Fuel Corporation was formed by a merger of the Metropolitan and Brighton gas companies.

The Corporation combines the resources of government with those of private enterprise and has the fundamental objective of providing Victorians with an efficient, economical and reliable gas supply.

Natural gas is distributed to almost 1.2 million domestic, industrial and commercial customers through a silent, unobtrusive and safe underground network of transmission pipelines and mains, some 22,615 kms in length.

In addition to the greater Melbourne area, a reticulated supply is provided at 50 cities and towns throughout Victoria and at Albury, NSW.

Ninety-nine per cent of reticulated supply is natural gas, purchased from Esso and BHP.

While the Corporation's main business is the supply of natural gas, another important function is marketing liquefied petroleum gas (LPG). Under the 'Heatane Gas' brand, LPG is sold to 170,000 customers either direct or through a state-wide network of 800 independent dealers.

The greater part of the Corporation's revenue comes from the sale of gas and is used to fund operating expenses. Items of capital expenditure are financed from public and private borrowings, together with internally generated funds.

The Corporation has showroom and service facilities throughout the State to handle another vital facet of its business—the sale, installation and maintenance of appliances. Many of these appliances—largely through Corporation research and development work—are more energy efficient than in the past and consequently more economical to operate.

The Corporation today consists of the parent organisation and three wholly-owned subsidiary companies: Gas and Fuel Exploration N L, C D Resources Pty Ltd (both with joint venture interests), and The Albury Gas Company.

The Corporation has obligations to employees, customers, shareholders and the general community. As a public authority, the Corporation is responsible to the Government and the Parliament of Victoria, through the Minister for Industry and Economic Planning, the Hon. David White, MLC.

Queensland

Electricity reticulation

The electricity supply industry in Queensland is regulated by the *Electricity Act 1976–1989*, the principal purpose of which is to provide the administrative framework within which a public supply of electricity is available to consumers. The Act requires that supply is to be properly planned, effectively coordinated, economical and reliable.

The Queensland Electricity Commission (QEC) is the arm of government through which the above functions are coordinated and has direct responsibility for electrical safety (in its widest sense), planning the electricity system as well as construction and operation of major power stations and the main transmission system. The QEC provides electricity to seven Electricity Boards and to certain special major users of power, determines electricity prices and is responsible for industry financial planning.

Electricity generation, transmission and distribution

Electricity generation in Queensland is based primarily on the State's plentiful resources of black coal. Supply of 96.7 per cent of the energy needs of the industry in 1988–89 came from this source. The Barron Gorge and Kareeya hydro-stations produced 3.2 per cent with the remainder being produced by the gas turbine stations connected to the main transmission network and by internal combustion stations supplying isolated townships.

To meet peak demand loads, the Wivenhoe pumped storage hydro-electric power station generated 116 gigawatt hours of electricity during 1988–89 from a total 170 gigawatt hours used in pumping, realising an average pumped storage cycle efficiency of 68.2 per cent.

Annual total energy sales have been growing at 6.5 per cent per annum over the last five years. The annual increase in domestic sales for 1988–89 was 4.2 per cent. This follows an increase of 5.3 per cent last year but is still above the 3.9 per cent average annual increase for the last five years. The commercial and industrial sector has been the dominant influence on total sales growth with an average 7.3 per cent annual growth over the past five years.

New development

With the completion of the Callide 'B' Power Station, the Callide 'A' and Collinsville Power Stations have been able to be retired from service. This means power generation from coal-fired stations is now consolidated into four sites, at Swanbank, Gladstone, Tarong and Callide.

Each of the six 275 MW units at Gladstone is progressively undergoing refurbishment and this will ensure that Gladstone will meet a high level of availability and efficiency targets through the nineties.

Planning for the future is still based on coal-fired power stations providing the bulk of Queensland's electrical energy needs, augmented as necessary by pumped-storage and conventional hydro-electric stations for peaking capacity. To this end plans are well advanced on the 600 MW Tully-Millstream Hydro-Electric Scheme in North Queensland to commence generation in 1997. This power station will follow Stanwell which is anticipated to commence commercial operation in 1993 and to be completed by 1996.

Gas reticulation

Queensland has a reticulated town gas system in the Brisbane region and in the cities and towns of Bundaberg, Cairns, Roma, Dalby, Oakey and Toowoomba. By June 1989 there were over 3,049 kilometres of mains laid in these centres and the systems serviced 116,126 consumers. Roma, Dalby, Oakey, Toowoomba, South Brisbane and the main industrial areas of North Brisbane reticulate natural gas, whereas Bundaberg, Cairns and the domestic–commercial areas of North Brisbane reticulate reformed town gas. Total sales of natural gas (excluding feedstock) in 1988–89 were 18,459 TJ compared with 19,711 TJ in 1987–88. Sales of reformed town gas were 1,134 TJ and 1,155 TJ respectively.

Western Australia

State Energy Commission of Western Australia

The State Energy Commission of Western Australia (SECWA) is specifically responsible for ensuring the effective and efficient utilisation of the State's energy resources and for providing economical and reliable supplies of electricity and gas.

Electricity generation and distribution

SECWA owns and operates three major thermal power stations. These are located at Muja (1,040 MW capacity) and Bunbury (120 MW), both using local coal to produce electricity, and at Kwinana (880 MW). Kwinana power station has the capacity to burn coal, oil or natural gas, although natural gas from the North West Shelf is the major fuel used. There are 20 MW capacity gas turbine generating units at Geraldton, Kalgoorlie and Kwinana. An additional eleven 36 MW gas turbine generating units will be commissioned progressively through to the end of 1990 at Mungarra (east of Geraldton) and Pinjar (north of Wanneroo)—both remote controlled—and at Kalgoorlie.

SECWA operates two power grid systems which supply the electricity needs of 98 per cent of the State's population. The two systems are:

- *The South West interconnected system.* Power from the three major stations provide the bulk of electricity fed into the South-West system. The gas turbines at Kwinana, Kalgoorlie and Geraldton provide back-up supplies. This grid services the metropolitan area and covers the southern portion of the State extending from Kalbarri south to Bremer Bay and from Perth east to Kalgoorlie. Kalgoorlie is fed by a 680 km transmission line from Muja, one of the longest radial feed lines constructed in Australia.
- *The Pilbara interconnected system.* This system interconnects Karratha, Dampier, Cape Lambert, Wickham, Roebourne, Port Hedland and Goldsworthy. Electricity is supplied from a generating plant at Cliffs Robe River Iron Associate's power station at Cape Lambert. The plant is fuelled by North West Shelf natural gas. Back-up power can be drawn from the SECWA's stand-by diesel generating facility at Port Hedland, from Hamersley Iron Pty Ltd's power station at Dampier and from a SECWA gas turbine generating unit also located in Dampier.

In areas too remote to utilise the interconnected grid systems, the SECWA operates 28 diesel power stations and provides support services for the Commonwealth Department of Aboriginal Affairs to help run 34 Aboriginal village power stations.

At 30 June 1989, the SECWA's generating capacity from its interconnected grid system was 2,100 MW, while the capacity of its supply system in country areas was 178 MW. There were 596,609 customer accounts for electricity throughout the State.

Gas reticulation

The SECWA is the main supplier of gas in Western Australia. It owns and operates the Dampier to Wagerup natural gas pipeline which feeds North West Shelf gas into an extensive reticulation system in the Perth metropolitan area as well as smaller country reticulation systems at Geraldton and Carnarvon to the north and Pinjarra and Bunbury in the south-west. The SECWA also reticulates tempered liquefied petroleum (TLP) gas through a local system at Albany on the south coast.

At 30 June 1989, there were 224,405 customer accounts for natural gas and 2,459 customer accounts for TLP gas.

Wind energy

In March 1987, SECWA commissioned six 60 kilowatt wind turbines at Salmon Beach, a few kilometres west of the south coastal town of Esperance, to augment the local electricity supply. Now the SECWA is studying the use of wind energy generators on the interconnected grid and has identified sites near Geraldton to the north and Cowaramup in the south-west as being suitable for wind farms of up to 20 MW capacity.

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 coordination of the major portion of the State's electricity supply, taking 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 interconnect the mains of the Trust with those of other organisations; and give or receive supplies of electricity in bulk.

Capacity and production

At 30 June 1990, the Electricity Trust's installed capacity was 2,350 MW. Its major power stations are Port Augusta Northern Power Station (500 MW), Torrens Island (1,280 MW) and Port Augusta Playford 'B' (240 MW). The Trust also operates gas turbine stations at Dry Creek (156 MW), Mintaro (90 MW) and Snuggery (75 MW) and a small diesel station at Port Lincoln (9 MW).

The Trust supplies over 660,000 customers, accounting for over 95 per cent of all electricity consumers in the State.

The two main fuels used by the Trust are coal from Leigh Creek for the Port Augusta power stations and natural gas from the Cooper Basin for the Torrens Island, Dry Creek and Mintaro stations.

Future developments

A 500 MW capacity interconnection with the Victorian–New South Wales systems has been operational since March 1990.

Gas reticulation

The South Australian Gas Company is a privately owned company incorporated by an Act of Parliament in 1861. The first coal gas was produced at Brompton in 1863.

When natural gas became available from the Cooper Basin in the late 1960s, the Gas Company contracted a supply of this indigenous fuel. Deliveries commenced in 1969 and, with the complete conversion of the metropolitan area to natural gas in January 1971, coal carbonising and carburetted water gas plants were shut down.

Under the 1966 contract, the Gas Company paid the Cooper Basin producers for the gas, who, in turn, paid the transportation charge of the Natural Gas Pipelines Authority. In 1974, major changes to contracts and other arrangements were effected. The Pipelines Authority—renamed the Pipelines Authority of South Australia (PASA)—became responsible for purchasing gas at the Cooper Basin and on-selling it to the Gas Company and a small number of other customers. The 1966 contract expired on 1 January 1988, from which date a new supply contract with PASA took effect.

Natural gas is reticulated throughout most of the Adelaide metropolitan area, Angaston, Whyalla, Peterborough and Port Pirie. Liquefied petroleum gas is distributed by reticulation at Mount Gambier and Roxby Downs and is available elsewhere as bottled gas.

The company places great emphasis on promoting natural gas with both the domestic and commercial–industrial markets as a cheap and environmentally friendly fuel. On 1 June 1988, the South Australian Gas Company merged with the South Australian Oil and Gas Corporation to form SAGASCO Holdings Ltd. Two new subsidiaries were formed: South Australian Gas Company Ltd (to undertake the operations of the old utility) and SAGASCO Resources Ltd. The sales and distribution of LPG is now handled by a new company, SAGASCO LPG Pty Ltd.

Tasmania

Electricity

Hydro-electric power accounts for almost all reticulated energy in Tasmania. An even distribution of rainfall throughout the year and the establishment of numerous lakes within the State, has created substantial artificial storage which has enabled the State to produce electricity at a lower cost than elsewhere in Australia.

Capacity and Transmission

Tasmania's electricity requirements are provided by the Hydro-Electric Commission which was created in 1930. The total installed generator capacity at 30 June 1989 was 2,315 MW of which almost 90 per cent was supplied by an integrated hydro-network. An oil-fired thermal station of 240 MW is located at Bell Bay.

Construction is continuing on two more hydro-power schemes in western Tasmania. The King River Power Development, scheduled for completion in mid 1992, and the Anthony Power Development, expected to be completed in 1994, will add 226 MW to the installed capacity of the system.

The total energy generated during the 1989–90 financial year was 9,021 MWh, a 1.3 per cent increase on the previous year. Total sales amounted to 8,908.5 MWh of which 5,440 MWh was sold to the major industrial sector.

Total water storages at June 1990 were 24.3 per cent compared with 34.9 per cent at June 1989. Below average rainfall for the year accounted for this deficit and generators at the Bell Bay oil-fired thermal station were used to generate electricity during the period November to June.

The Hydro-Electric Commission also purchases some electricity from a privately owned wind power station on Flinders Island when it is working.

A 1.5 MW Wave Power Station on King Island is possible. A feasibility study is to be undertaken by a Norwegian company Norwave which has built a similar plant on Norway's west coast.

Gas reticulation

Gas is only a minor energy source in Tasmania. Town gas is manufactured and reticulated in Launceston only. Bottled LPG is a minor domestic, commercial and motor fuel in the State.

Northern Territory

The Power and Water Authority (PAWA) was created on 1 July 1987. It is responsible for generation, transmission and distribution of electricity, the provision of water and sewerage services and the sale of natural gas.

A natural gas pipeline from the Amadeus Basin in Central Australia to Darwin was completed in December 1986 and the Territory's four major centres—Darwin, Katherine, Tennant Creek and Alice Springs—all use indigenous natural gas, replacing imported heavy fuel oil and distillate, as fuel for electricity generation. A combined cycle block of 100 MW comprises half of the installed capacity at Channel Island Power Station near Darwin.

A privately built, owned and operated transmission line between Darwin and Katherine was commissioned in November 1989. The line allows reserve capacity to be shared and has reduced costs because of the higher operating efficiencies of Channel Island Power Station compared with Katherine Power Station.

PAWA supplies electricity to some 44,500 customers in four major centres, seven minor centres and seventy-five very small remote communities. Interconnection exists only between two of the major centres.

Australian Capital Territory

Electricity distribution

Electricity is distributed within the Territory by the ACT Electricity and Water Authority (ACTEW). During the year 1989–90, the total bulk electricity purchased was 2,200 GWh, comprised of 1,530 GWh provided by the Electricity Commission of New South Wales and a reservation of 670 GWh from the Snowy Mountains Hydro-Electric Authority. The system maximum demand was 552 MW. The ACTEW supplied 107,278 customers at 30 June 1990.

Gas reticulation

Reticulated gas first became available in the Australian Capital Territory in January 1982. Natural gas from the Moomba fields in South Australia is piped to Canberra via a 70 kilometre spur which branches from the main Moomba–Sydney pipeline at Dalton. AGL Canberra Ltd has invested capital of $85 million to set up the infrastructure necessary to service and support a major utility and, to date, has laid over 2,200 kilometres of gas mains, bringing reticulated natural gas within reach of an estimated 70,000 dwellings in 74 suburbs.

During 1988–89, AGL Canberra Ltd reticulated 2,500 TJ of natural gas to 1,000 commercial and industrial establishments and about 25,000 homes. Over the next five years the company expects to invest a further $30 million and, in the long term, over 2,500 kilometres of gas mains will service over 50,000 customers in the Territory.

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National Energy Survey: Energy Demand in Industry, Australia, 1986–87 (8217.0)

New South Wales Energy Survey: Part 1—Household Appliances, Facilities, Insulation and Appliance Acquisition, October 1984 (8211.1)

New South Wales Energy Survey, October 1984: Part 2—Household Energy Consumption (8212.1)

New South Wales Energy Survey, October 1984: Sample File on Magnetic Tape (8215.1)

Domestic Firewood and Coal Usage, Tasmania, 1985 (8204.6)

Other Publications

Other organisations which produce statistics in this field include the Department of Primary Industries and Energy, the Joint Coal Board, the Australian Institute of Petroleum and the Electricity Supply Association of Australia. 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.

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MANUFACTURING, RETAIL TRADE AND SERVICE INDUSTRIES

MANUFACTURING

An historical summary of the development of the Manufacturing industry in Australia since 1788 was contained in *Year Book* No. 71.

Government Authorities

Industry Commission

The Industry Commission is the Commonwealth Government's major review and inquiry body in industry matters. As part of its 1989–90 Budget initiatives, the Government announced a restructuring of the Industries Assistance Commission (IAC) which had advised on industry assistance and related matters since January 1974. The IAC itself replaced the Tariff Board which had advised governments on assistance for manufacturing industries since 1921.

The Industry Commission also absorbed the functions of two other bodies: the Interstate Commission which had been re-established in 1984 to advise the Commonwealth Government on interstate transport matters; and the Business Regulation Review Unit, an agency of the Department of Industry, Technology and Commerce which reviewed the efficacy of existing regulations and advised on new regulatory proposals.

Like the IAC, the Industry Commission is an advisory body with an economy-wide perspective, a broad industry charter and public inquiry processes. The principal function of the Industry Commission is to hold public inquiries and report on the industry matters referred to it. In order to ensure the widest possible scope for its inquiries, industry matters include legislative or administrative actions of the Commonwealth, States or Territories and industry is defined to cover industry of any kind or grouping.

The Commission is required to report annually on the economic performance of industry, the principal factors affecting that performance, and the effects of assistance and regulation on industry and the economy generally. The Commission also has a role advising on business regulations and preparing occasional research and information papers that enhance community understanding of industry policy issues.

The Commission operates under general policy guidelines which are specified in the Industry Commission Act. These guidelines are cast in terms of encouraging the development of efficient industries, facilitating structural adjustment, reducing unnecessary industry regulation and recognising the interests of other industries and the community generally. In addition, the Commission must report on the social and environmental consequences of any recommendations it makes.

The legislation contains provisions similar to those in the IAC Act which constrain Commonwealth Ministers from changing certain forms of assistance without a prior report from the Commission unless Parliament passes overriding legislation. However, the Government is not obliged to accept the Commission's advice. Final responsibility for determining industry arrangements rests with the Commonwealth Government and the State and Territory Governments.

The Commission's inquiry procedures encourage public participation in policy formulation and maximise public scrutiny of the advice going to government. Wide public notice is given that an inquiry is underway. Typically, a draft report is prepared on the basis of written submissions, the Commission's own investigative work and wide ranging consultations with industry, users, trade unions, government agencies, consumer and environmental groups and others likely to be interested in the inquiry. Draft reports are published and public hearings 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 other cities throughout Australia. For the most part, reports arising from the inquiry process have to be tabled in Parliament within 25 sitting days of receipt. Commission reports are available from Commonwealth Government Bookshops in capital cities.

The inquiry program for the Commission demonstrates the wide spectrum of issues on which it is expected to contribute information, analysis and advice. The following inquiries were underway in mid-1990:

Mining and minerals processing
Construction costs of major projects
Product liability
Recycling of products
Aids and appliances for the disabled
Energy generation and distribution
Rail transport
Statutory marketing arrangements for primary products
Commercial Tariff Concession and By-law Systems
The automotive industry

Other inquiries scheduled on the work program are:

Exports of health services
Exports of education services
Availability of capital
Dairying
Raw material pricing for domestic use
Export franchising and distribution arrangements
The sugar industry
Implications for Australia of firms locating offshore.

Bureau of Industry Economics

The Australian Government established the Bureau of Industry Economics in 1977 as a major centre for research into the manufacturing and commerce sectors. In recent years this role has been expanded to include science and technology and building issues. Formally attached to the Department of Industry, Technology and Commerce, the Bureau has professional independence in the conduct and reporting of its research.

The major objectives of the Bureau are to:

- increase community and industry understanding of economic developments and industry policy issues in the manufacturing and services sectors by conducting and publishing objective research;

- carry out applied economic research to assist the evaluation and formulation of industry policies and programs; and
- foster basic and applied economic research into industry policy issues at Australian tertiary institutions and research institutes.

The recent expansion in the Bureau's responsibilities means that its research now encompasses the full range of factors affecting the performance of the industry and commerce sectors from infrastructural constraints and research and development, through to the final marketing and distribution of products.

In order to ensure the continuing relevance of its research, the Bureau seeks suggestions from interested parties in the private and public sectors on the most pressing economic issues requiring analysis. In formulating the final research program, the Bureau has regard to the priorities of the Minister and Department, and the view of its own Council of Advice.

The members of the Council are drawn from a wide range of backgrounds, including the universities, industries and the trade union movement. In this way the Council of Advice provides a major link between the Bureau and the community. The Council assists with the development of the work of the Bureau and the effective dissemination of the results of the Bureau's work.

In addition to its research work, the Bureau provides specialist economic advice to the Department of Industry, Technology and Commerce on matters of immediate importance. The Bureau is also responsible for providing specialist macro-economic and statistical advice to the Minister and the Department.

The Government has identified small business as an area of major importance, and has established a small business research unit within the Bureau of Industry Economics to investigate issues of concern to that sector.

The need to raise the community's awareness of the economic issues affecting Australian industry has been identified by the Government as a matter of importance. The Bureau is contributing to the community's knowledge of these issues both by means of its publications and by convening conferences such as the Manufacturing Industry Outlook Conference.

The Bureau has a staff of approximately 50 officers with backgrounds in business, government and university teaching and research.

Current research projects include:

- factors affecting international productivity differences;
- mergers and acquisitions;
- effect of exchange rate fluctuations;
- directions for CSIRO research for the manufacturing sector;
- efficiency in residential construction;
- industrial development and the environment; and
- international comparisons of the cost of capital.

On-going functions include:

- short term consultancy;
- small businesses;
- corporate taxation;
- economic conditions; and
- program evaluation.

The results of the Bureau's research are published in:

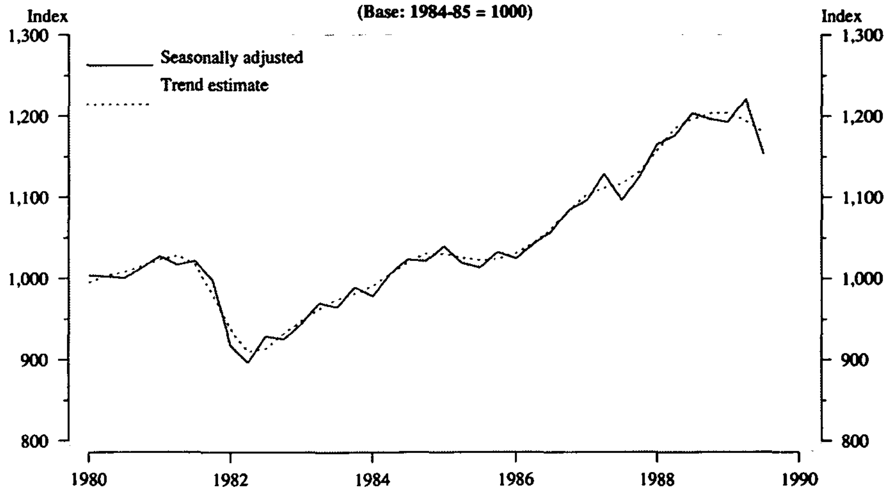
- working papers—technical issues or preliminary results;
- information bulletins—statistics and other information; and
- research reports—comprehensive results of major projects.

Manufacturing Industry Statistics

Manufacturing trends

Quarterly indexes of manufacturing production are shown in the ABS publication *Quarterly Indexes of Industrial Production, Australia* (8125.0). That publication includes, in index number form, quarterly constant price estimates of manufacturing gross product in total and for each manufacturing subdivision of ASIC. The estimates are derived using the gross output method, i.e. base year estimates of gross product are extrapolated by constant price estimates of gross output. Quarterly constant price estimates of gross output are derived mainly from quarterly survey data relating to manufacturers' sales and increase in stocks (of finished goods and work in progress). The quarterly estimates of gross product so derived are benchmarked to annual estimates of gross product which have been derived from annual output data from manufacturing censuses.

INDEXES OF TOTAL MANUFACTURING GROSS PRODUCT AT AVERAGE 1984-85 PRICES (Base: 1984-85 = 1000)



INDEXES OF MANUFACTURING INDUSTRY GROSS PRODUCT AT AVERAGE 1984–85 PRICES—ORIGINAL

Index numbers (Base: 1984–85 = 1000)

Description	1980–81	1981–82	1982–83	1983–84	1984–85	1985–86	1986–87	1987–88	1988–89	1989–90
Food, beverages and tobacco	992	996	992	989	1,000	1,012	1,042	1,104	1,141	1,178
Textiles	923	942	869	907	1,000	1,017	1,085	1,097	1,103	1,159
Clothing and footwear	963	960	897	966	1,000	1,117	1,041	1,062	1,102	950
Wood, wood products and furniture	1,012	1,028	908	953	1,000	1,137	1,031	1,157	1,200	1,188
Paper, paper products, printing and publishing	907	930	881	919	1,000	1,018	1,086	1,176	1,252	1,279
Chemical, petroleum and coal products	936	969	941	975	1,000	990	1,030	1,105	1,129	1,135
Non-metallic mineral products	1,045	1,069	920	926	1,000	1,136	1,033	1,090	1,233	1,224
Basic metal products	956	955	826	916	1,000	994	1,016	1,010	1,070	1,101
Fabricated metal products	1,158	1,201	1,026	998	1,000	1,083	1,086	1,226	1,342	1,406
Transport equipment	924	981	932	916	1,000	993	933	956	1,039	1,078
Other machinery and equipment	1,147	1,197	1,002	949	1,000	1,011	1,079	1,143	1,251	1,283
Miscellaneous manufacturing	969	1,011	921	944	1,000	911	1,052	1,130	1,185	1,219
Total manufacturing	**997**	**1,021**	**937**	**951**	**1,000**	**1,025**	**1,040**	**1,102**	**1,169**	**1,192**

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, Transport, Selected Services Industries 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, 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 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 as described in the ABS publication *Australian Standard Industrial Classification* (1201.0 and 1202.0). 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.

For a more detailed description of the Integrated Economic Censuses reference should be made to *Year Book* No. 56, Chapter 31.

Commencing with the 1975–76 Manufacturing Census, only a limited range of data (i.e. employment and wages and salaries) are collected from single establishment manufacturing enterprises with fewer than four persons employed. This procedure significantly reduces 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).

Up to and including 1986–87, manufacturing censuses have been conducted for each year, with the exception of 1970–71 and 1985–86. Current ABS collection strategy is to conduct a full scale census triennially with a small-scale census in each of the intervening years. In the small-scale censuses all businesses are asked for information on employment, turnover and wages and salaries paid during the year.

MANUFACTURING ESTABLISHMENTS: SUMMARY OF OPERATIONS, AUSTRALIA

Census year	Establishments at 30 June	Employment at end of June (a)	Wages and salaries (b)	Turnover (c)	Stocks Opening (d)	Stocks Closing (d)	Purchases, transfers in and selected expenses (d)	Value added (d)	Fixed capital expenditure less disposals (d)
	No.	'000	$m	$m	$m	$m	$m	$m	$m
1971–72	36,206	1,304	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	1,326	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	1,362	7,176.4	31,246.7	4,299.1	5,268.5	19,329.8	12,886.3	1,215.5
1974–75	36,836	1,239	8,588.0	35,468.0	5,267.2	6,572.2	21,712.3	15,060.7	1,456.4
1975–76	37,814	1,230	9,524.9	39,485.3	6,581.1	7,023.3	23,371.7	16,555.8	1,451.7
1976–77(e)	37,879	1,195	10,597.5	44,814.3	6,985.1	7,996.8	27,010.0	18,816.1	1,548.0
1977–78(f)	37,889	1,157	11,210.7	48,112.6	7,863.5	8,498.1	28,992.7	19,754.4	1,877.3
1978–79	38,231	1,168	12,045.5	55,211.3	8,515.4	9,299.6	33,765.4	22,230.1	2,262.8
1979–80	40,150	1,174	13,449.5	65,354.8	9,287.6	11,126.4	41,579.5	25,614.0	2,186.7
1980–81	39,956	1,180	15,011.3	73,723.0	11,047.1	12,366.9	46,448.7	28,594.1	2,882.7
1981–82	42,730	1,169	17,140.1	81,869.3	12,377.4	13,297.3	51,240.4	31,548.7	4,084.2
1982–83	42,283	1,042	17,562.2	82,320.6	13,094.4	13,035.1	51,225.8	31,035.5	3,678.4
1983–84(g)	41,581	1,047	17,626.6	88,639.3	12,918.1	13,181.5	54,681.4	34,221.3	2,778.4
1984–85	41,854	1,052	18,975.7	98,208.7	13,088.8	14,473.8	61,206.6	38,387.1	3,133.7
1985–86		No manufacturing census was conducted in respect of this year.							
1986–87	42,179	1,052	21,728.2	117,898.3	15,653.0	16,673.6	72,066.7	45,529.2	n.a.
1987–88	45,476	1,093	24,200.0	135,441.3	n.a.	n.a.	n.a.	n.a.	n.a.
1988–89	42,274	1,097	25,859.2	153,198.3	n.a.	n.a.	n.a.	n.a.	n.a.

(a) Includes working proprietors. *(b)* Excludes the drawings of working proprietors. *(c)* The data from 1975–76 to 1984–85 exclude single establishment manufacturing enterprises with fewer than four persons employed. *(d)* The data from 1975–76 exclude single establishment manufacturing enterprises with fewer than four persons employed. *(e)* These data and those of previous years are classified according to the 1969 (preliminary) edition of ASIC. *(f)* These data and those up to and including 1982–83 are classified according to the 1978 edition of ASIC. *(g)* These data and those of following years are classified according to the 1983 edition of ASIC.

Main structural aggregates relating to number of establishments, employment, wages and salaries, and turnover are shown in the following tables. Further detailed statistics are contained in the following ABS statistical publications: *Manufacturing Industry, Details of Operations by Industry Class, Australia* (8203.0) and *Manufacturing Industry, Selected Items of Data by Employment Size, Australia* (8204.0).

MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS BY INDUSTRY AUSTRALIA

Description	*Establishments operating at 30 June (No.)*	*Employment at 30 June(a)*			*Wages and salaries (b) ($m)*	*Turnover ($m)*	*Persons employed per establishment (No.)*	*Turnover per person employed ($'000)*
		Males ('000)	*Females ('000)*	*Persons ('000)*				
			1987–88					
Food, beverages and tobacco	3,938	120.6	55.0	175.5	3,866.0	27,764.7	45	158.2
Textiles	731	21.3	14.1	35.4	754.7	3,891.0	48	109.9
Clothing and footwear	2,332	18.6	56.6	75.2	1,217.2	4,672.1	32	62.1
Wood, wood products and furniture	4,688	68.6	13.4	82.0	1,503.3	7,006.5	17	85.5
Paper, paper products, printing and publishing	3,356	73.2	36.3	109.5	2,680.2	12,018.3	33	109.7
Chemical, petroleum and coal products	960	39.6	14.7	54.3	1,566.2	12,877.3	57	237.1
Non-metallic mineral products	1,863	36.0	45	40.5	1,006.2	6,020.8	22	148.8
Basic metal products	582	68.5	6.2	74.7	2,150.3	16,358.2	128	219.0
Fabricated metal products	4,848	86.5	18.3	104.8	2,197.6	10,113.0	22	96.5
Transport equipment	1,494	95.4	15.9	111.3	2,561.9	12,864.7	75	115.5
Other machinery and equipment	4,221	102.3	32.8	135.1	3,037.1	13,114.8	32	97.5
Miscellaneous manufacturing	2,594	44.7	20.8	65.5	1,410.4	7,245.5	25	110.7
Total manufacturing	**31,607**	**775.3**	**288.6**	**1,063.8**	**23,951.1**	**133,947.0**	**34**	**125.9**
			1988–89					
Food, beverages and tobacco	3,735	121.6	54.8	176.4	4,001.3	30,757.3	47	174.4
Textiles	717	19.0	13.1	32.1	713.8	4,086.4	45	127.2
Clothing and footwear	2,312	18.4	55.1	73.5	1,305.7	5,180.2	32	70.5
Wood, wood products and furniture	4,849	70.2	14.2	84.4	1,658.2	7,897.8	17	93.5
Paper, paper products, printing and publishing	3,398	74.1	38.0	112.1	2,863.7	13,367.3	33	119.2
Chemical, petroleum and coal products	949	38.5	14.9	53.4	1,590.5	13,848.8	56	259.5
Non-metallic mineral products	1,501	37.7	4.6	42.3	1,136.1	7,268.5	28	171.7
Basic metal products	595	65.4	5.3	70.7	2,221.1	19,408.4	119	274.3
Fabricated metal products	4,827	88.8	19.2	108.0	2,434.7	11,989.0	22	111.0
Transport equipment	1,599	98.5	17.8	116.3	2,828.8	14,771.2	73	127.0
Other machinery equipment	4,142	104.1	33.3	137.4	3,343.8	15,191.5	33	110.5
Miscellaneous manufacturing	2,626	45.1	20.9	66.1	1,504.3	8,141.2	25	123.2
Total manufacturing	**31,250**	**781.4**	**291.4**	**1,072.8**	**25,601.8**	**151,907.8**	**34**	**141.6**

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.
(a) Includes working proprietors. *(b)* Excludes the drawings of working proprietors.

Number of establishments

The following figures relate to manufacturing establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

It should be noted that the standard units definitions employed in the system of integrated economic statistics have been revised, with the establishment now being generally delimited on the basis of availability of accounting data rather than in terms of a location.

The new units definitions are being progressively implemented on the ABS central business register as reporting arrangements with individual businesses are finalised. At the time that the 1988–89 census was conducted, only a small number of large businesses were reporting according to the new units rules. Therefore, for that census, the establishment continued in most cases to cover the operations carried on under one enterprise at a single physical location.

MANUFACTURING ESTABLISHMENTS—NUMBER OF ESTABLISHMENTS IN OPERATION AT 30 JUNE 1989 BY INDUSTRY

Description	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Food, beverages and tobacco	979	1,136	708	381	364	125	27	15	3,735
Textiles	239	302	70	48	41	12	5	—	717
Clothing and footwear	848	1,059	214	107	69	11	2	2	2,312
Wood, wood products and furniture	1,452	1,385	944	394	451	173	18	32	4,849
Paper, paper products, printing and publishing	1,296	1,071	425	239	255	58	17	37	3,398
Chemical, petroleum and coal products	386	309	111	50	75	17	1	—	949
Non-metallic mineral products	478	378	313	126	144	38	12	12	1,501
Basic metal products	198	214	73	48	43	11	6	2	595
Fabricated metal products	1,696	1,305	797	419	466	104	31	9	4,827
Transport equipment	454	451	322	148	179	30	9	6	1,599
Other machinery and equipment	1,547	1,271	482	372	378	57	15	20	4,142
Miscellaneous manufacturing	896	890	382	211	186	40	15	6	2,626
Total manufacturing—									
1988–89	**10,469**	**9,771**	**4,841**	**2,543**	**2,651**	**676**	**158**	**141**	**31,250**
1987–88	10,919	9,858	4,624	2,505	2,675	686	172	168	31,607
1986–87	9,811	9,109	4,090	2,267	2,660	634	145	131	28,847

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.

Employment

The statistics on the number of persons employed shown in the following table relate to end of June 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—EMPLOYMENT AT END OF JUNE BY INDUSTRY, 1988–89
(No. persons)

Description	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Food, beverages and tobacco	52,052	52,389	35,601	16,307	12,135	6,489	722	669	176,364
Textiles	8,300	17,417	1,151	2,493	1,277	1,427	70	—	32,135
Clothing and footwear	22,235	38,251	5,956	4,293	1,850	686	n.p.	n.p.	73,488
Wood, wood products and furniture	25,185	22,037	15,525	7,977	8,998	3,887	202	626	84,437
Paper, paper products, printing and publishing	40,037	37,453	11,934	7,841	7,932	5,024	366	1,550	112,137
Chemical, petroleum and coal products	24,091	19,021	3,897	2,333	3,168	n.p.	n.p.	—	53,373
Non-metallic mineral products	13,533	11,491	7,107	3,890	5,070	911	150	180	42,332
Basic metal products	33,370	12,984	7,074	7,675	5,688	n.p.	934	n.p.	70,745
Fabricated metal products	37,034	32,787	16,726	8,883	9,888	1,916	387	411	108,032
Transport equipment	27,661	52,292	11,180	18,752	5,001	1,212	119	68	116,285
Other machinery and equipment	56,041	45,253	10,950	15,344	8,473	909	71	341	137,382
Miscellaneous manufacturing	22,097	26,001	6,642	7,308	3,242	613	102	60	66,065
Total manufacturing—									
1988–89	**361,636**	**367,376**	**133,743**	**103,096**	**72,722**	**26,933**	**3,280**	**3,989**	**1,072,775**
1987–88	369,253	367,603	127,544	95,168	72,069	24,828	3,207	4,170	1,063,842
1986–87	358,844	356,992	117,935	90,258	69,452	24,371	2,864	4,132	1,024,848

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons

The quarterly Survey of Employment and Earnings is the ABS' major source of industry statistics on employed wage and salary earners. Further information on this survey is available in Chapter 7.

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 excluded.

MANUFACTURING ESTABLISHMENTS—WAGES AND SALARIES BY INDUSTRY
1988–89
($ million)

Description	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Food, beverages and tobacco	1,254.6	1,192.9	761.4	348.2	273.9	139.5	16.5	14.2	4,001.3
Textiles	186.1	399.8	22.0	55.0	23.4	26.3	1.3	—	713.8
Clothing and footwear	387.4	711.9	88.9	76.0	29.5	9.8	n.p.	n.p.	1,305.7
Wood, wood products and furniture	514.6	445.5	266.9	152.2	182.2	80.9	2.7	13.0	1,658.2
Paper, paper products, printing and publishing	1,051.0	986.4	270.4	197.3	161.2	146.8	8.4	42.3	2,863.7
Chemical, petroleum and coal products	711.2	586.3	109.9	62.4	94.1	n.p.	n.p.	—	1,590.5
Non-metallic mineral products	377.1	326.2	174.8	95.7	130.1	22.9	4.2	5.0	1,136.1
Basic metal products	1,073.1	389.3	208.2	218.3	193.1	n.p.	}46.1	n.p.	2,221.1
Fabricated metal products	853.4	776.9	333.8	180.6	230.4	39.4		n.p.	2,434.7
Transport equipment	689.2	1,310.5	241.1	443.6	116.0	24.3	2.7	1.3	2,828.8
Other machinery and equipment	1,390.7	1,140.3	244.7	331.4	206.2	19.3	1.5	9.6	3,343.8
Miscellaneous manufacturing	519.4	619.3	126.5	154.4	70.4	11.5	1.8	1.1	1,504.3
Total manufacturing—									
1988–89	**9,007.7**	**8,885.4**	**2,848.6**	**2,315.1**	**1,710.5**	**648.2**	**86.3**	**99.9**	**25,601.8**
1987–88	8,759.8	8,302.0	2,545.4	2,003.4	1,604.8	562.6	81.5	91.4	23,951.1
1986–87	7,911.6	7,443.2	2,263.3	1,809.1	1,407.0	526.4	67.5	89.6	21,517.6

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.

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 for own use, or for rental or lease. Receipts from interest, royalties, dividends, and sales of fixed tangible assets are excluded.

MANUFACTURING ESTABLISHMENTS—TURNOVER BY INDUSTRY
1988–89
($ million)

Description	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Food, beverages and tobacco	9,009.7	9,767.0	6,130.5	2,471.2	2,216.9	1,002.9	102.7	56.5	30,757.3
Textiles	1,174.3	2,109.9	184.4	377.6	116.7	119.8	3.6	—	4,086.4
Clothing and footwear	1,742.7	2,741.9	297.3	282.0	80.5	28.6	n.p.	n.p.	5,180.2
Wood, wood products and furniture	2,517.7	1,995.4	1,218.6	725.5	847.0	522.7	15.6	55.5	7,897.8
Paper, paper products, printing and publishing	4,982.7	4,743.1	1,201.7	830.9	684.1	796.1	30.0	98.7	13,367.3
Chemical, petroleum and coal products	5,757.2	4,387.3	2,175.8	514.4	826.4	n.p.	n.p.	—	13,848.8
Non-metallic mineral products	2,420.7	1,955.7	1,298.1	548.6	804.3	158.0	34.5	48.7	7,268.5
Basic metal products	8,173.1	3,921.7	2,736.1	1,439.7	2,193.6	n.p.	330.8	n.p.	19,408.4
Fabricated metal products	4,195.8	3,699.7	1,768.6	852.6	1,138.4	185.4		n.p.	11,989.0
Transport equipment	2,622.6	7,513.7	1,279.8	2,883.9	402.7	56.2	7.7	4.6	14,771.2
Other machinery and equipment	6,224.2	5,542.5	1,051.5	1,409.2	834.9	79.1	6.3	43.9	15,191.5
Miscellaneous manufacturing	2,859.1	3,296.7	748.5	740.4	434.2	51.2	7.7	3.5	8,141.2
Total manufacturing—									
1988–89	**51,679.6**	**51,674.6**	**20,090.9**	**13,076.0**	**10,579.5**	**3,834.7**	**542.3**	**430.1**	**151,907.8**
1987–88	46,544.3	45,576.8	17,254.7	11,085.5	9,416.9	3,242.6	450.7	375.4	133,947.0
1986–87	40,540.9	39,969.8	14,848.5	9,352.7	8,038.0	3,050.2	404.7	370.4	116,575.3

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.

Purchases, transfers in and selected expenses
Stocks
Value added

The above three structural aggregates are now collected triennially. These items will again be collected in the next full scale census covering the period 1989–90.

Additional statistics on the Manufacturing Industry

The ABS conducts a number of sample surveys of businesses on a quarterly basis. The resultant statistics are released in the following publications:

- *Private New Capital Expenditure, Australia, Actual and Expected Expenditure* (5626.0)
- *Stocks, Manufacturers' Sales and Expected Sales, Australia* (5629.0)
- *State Estimates of Private New Capital Expenditure* (5646.0)
- *Company Profits, Australia* (5651.0)

Principal Manufacturing Commodities

The factory production of certain commodities is shown in the monthly publications of the ABS, and in the triennial publication, *Manufacturing Commodities, Selected Principal Articles Produced, Australia (Preliminary)* (8365.0). A more comprehensive list of articles produced is collected triennially and is available on request.

The table following shows the total recorded production of some selected articles manufactured in Australia. (*Source*: monthly publications 8357.0 to 8363.0, 8367.0 and 8368.0).

QUANTITIES OF SELECTED ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA

Article	*Unit of quantity*	*1987–88*	*1988–89*	*1989–90*
Basic iron, spiegeleisen and sponge iron	'000 tonnes	5,544	5,875	6,188
Iron and steel ingots or other primary forms*(a)*	"	6,093	6,651	6,674
Blooms and slabs*(b)*	"	2,661	2,578	2,440
Gas*(c)*	terajoules	502,176	513,624	536,872
Electricity	mil.kWh	136,867	144,854	152,970
Bricks, clay	million	1,867	2,142	2,060
Cement, portland	'000 tonnes	6,158	6,901	7,075
Particle boards and similar boards*(d)*	'000 cu m	n.a.	n.a.	774
Plastics in primary forms*(e)*	'000 tonnes	990	986	977
Sulphuric acid, oleum	"	1,818	1,904	1,464
Refrigerators, domestic	'000	386	380	346
Clothes washing machines, domestic	"	394	397	330
Colour television sets*(f)*	"	177	162	158
Electric motors	"	2,844	3,076	2,553
Lawn mowers, rotary petrol type	"	279	298	247
Motor vehicles—				
Cars and station wagons	"	315	333	384
Vehicles for goods and materials*(g)*	"	23	31	27
Yarn*(h)*—				
Cotton	tonnes	20,667	20,504	21,044
Wool	"	23,076	21,458	19,723
Woven fabric*(h)*—				
Cotton (incl. towelling)	'000 sq. m	39,415	36,307	40,157
Wool (incl. blanketing)	"	10,623	9,796	8,397
Man-made fibre	"	166,696	190,445	173,259
Textile floor coverings	"	41,651	44,888	44,271
Confectionery-				
Chocolate base	tonnes	85,981	92,597	92,783
Other	"	66,770	64,655	64,107
Beer*(i)*	ML	1,891	1,951	1,944
Tobacco and cigarettes*(j)*	tonnes	27,382	27,158	24,899

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.
(a) Includes ingots, puddled bars, pilings, blocks or lumps and steel in the molten state. *(b)* From rolling and forging of iron and steel (primary mills output). Excludes from continuous casting. *(c)* Available for issue through mains.Includes natural gas. *(d)* Not laminated. *(e)* Includes liquid, paste, powder, granules, flakes, blocks, irregular shapes, lumps and similar forms. *(f)* Excludes combination with radio etc. *(g)* Includes utilities, panel vans and prime movers for semi-trailers. *(h)* Includes mixtures predominantly of the fibre named. *(i)* Includes ale and stout. *(j) Source:* Australian Customs Service.

Concentration in the Manufacturing Industry

Concentration statistics provide information on the extent to which a few enterprise groups predominate in individual industries. They are a useful aid in assessing the degree of competition existing among enterprise groups engaged in an industry.

Concentration statistics for the manufacturing sector were first produced in respect of 1968–69. Similar statistics have subsequently been produced for 1972–73, 1977–78, 1982–83 and 1987–88. These statistics relate to Australia only and similar information is not available for States or other regional areas.

MANUFACTURING ESTABLISHMENTS—SUMMARY STATISTICS AND CONCENTRATION RATIOS FOR THE MANUFACTURING SECTOR, AUSTRALIA

Enterprise groups ranked by turnover	*1968–69*		*1972–73*		*1977–78*		*1982–83*		*1987–88*	
	EMPLOYMENT AT END OF JUNE(*a*)									
	'000	*Ratio*	*'000*	*Ratio*	*'000*	*Ratio*	*'000*	*Ratio*	*'000*	*Ratio*
4 largest	90.5	.07	89.4	.07	88.1	.08	82.4	.08	64.7	.06
8 largest	127.8	.10	135.9	.11	117.0	.11	103.9	.10	93.6	.09
12 largest	160.7	.12	161.0	.12	147.7	.13	137.3	.14	120.6	.11
16 largest	178.9	.14	185.1	.14	163.9	.14	158.5	.15	139.5	.13
20 largest	193.8	.15	204.6	.15	183.0	.16	166.7	.16	154.7	.15
25 largest	212.6	.16	229.9	.17	201.2	.18	194.2	.19	181.5	.17
50 largest	300.7	.23	326.8	.25	283.3	.25	281.7	.28	250.2	.24
100 largest	407.8	.32	442.3	.33	395.8	.35	374.0	.37	339.4	.32
200 largest	538.0	.42	581.4	.44	520.4	.46	475.3	.47	431.9	.41
All enterprise groups	1,289.6	1.00	1,325.6	1.00	1,132.7	1.00	1,011.6	1.00	1,063.8	1.00
	TURNOVER									
	$m	*Ratio*	*$m*	*Ratio*	*$m*	*Ratio*	*$m*	*Ratio*	*$m*	*Ratio*
4 largest	1,911.4	.10	2,462.4	.09	4,552.4	.09	8,229.9	.10	12,476.4	.09
8 largest	2,753.3	.15	3,620.9	.13	6,642.0	.13	12,198.6	.15	18,468.8	.14
12 largest	3,349.0	.18	4,446.1	.17	8,125.1	.17	15,161.0	.18	22,993.0	.17
16 largest	3,818.3	.21	5,099.0	.19	9,280.3	.19	17,535.5	.22	26,938.3	.20
20 largest	4,191.2	.22	5,656.5	.21	10,207.1	.21	19,436.2	.24	30,293.5	.23
25 largest	4,564.0	.24	6,245.3	.24	11,248.6	.23	21,446.3	.26	34,184.4	.26
50 largest	5,935.0	.32	8,431.9	.32	15,439.0	.32	29,342.8	.36	47,195.6	.35
100 largest	7,665.0	.41	11,262.4	.43	20,702.2	.43	38,839.0	.47	61,337.1	.46
200 largest	9,712.0	.52	14,299.0	.54	26,279.7	.55	47,400.7	.58	74,799.1	.56
All enterprise groups	18,646.7	1.00	26,372.7	1.00	48,097.4	1.00	82,320.6	1.00	133,819.8	1.00

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.
(*a*) Includes working proprietors.

Further information on concentration in the manufacturing industry is contained in the publication *Manufacturing Industry, Concentration Statistics, Australia* (8207.0).

Foreign Ownership and Control in the Manufacturing Industry

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.

MANUFACTURING INDUSTRY—OWNERSHIP BY COUNTRY 1986–87

	Employment at end of June(a)		*Wages and salaries(b)*		*Turnover*		*Value added*	
	No.	*%*	*$m*	*%*	*$m*	*%*	*$m*	*%*
Foreign ownership								
USA	75,742	7.4	1,856.5	8.6	12,013.4	10.3	4,658.3	10.2
UK	83,526	8.2	2,015.0	9.4	12,212.7	10.5	4,763.3	10.5
Other EEC*(c)*	18,227	1.8	428.0	2.0	2,661.7	2.3	1,027.2	2.3
Canada	15,325	1.5	374.1	1.7	2,801.9	2.4	882.4	1.9
Switzerland	8,423	0.8	195.8	0.9	1,183.6	1.0	373.1	0.8
New Zealand	15,690	1.5	356.1	1.7	2,187.6	1.9	784.8	1.7
Japan	14,950	1.5	333.2	1.5	2,497.7	2.1	919.0	2.0
Other	12,033	1.2	296.6	1.4	1,678.6	1.4	667.6	1.5
Total	*243,916*	*23.8*	*5,855.3*	*27.2*	*37,237.3*	*32.0*	*14,075.7*	*30.9*
Australian ownership	*780,871*	*76.2*	*15,661.1*	*72.8*	*79,294.5*	*68.0*	*31,433.1*	*69.1*
Total manufacturing	**1,024,787**	**100.0**	**21,516.3**	**100.0**	**116,531.8**	**100.0**	**45,508.8**	**100.0**

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.
(a) Includes working proprietors. *(b)* Excludes the drawings of working proprietors. *(c)* Includes Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands.

MANUFACTURING INDUSTRY—CONTROL BY COUNTRY 1986–87

	Establishments at 30 June		*Employment at end of June(a)*		*Wages and salaries(b)*		*Turnover*		*Value added*	
	No.	*%*	*No.*	*%*	*$m*	*%*	*$m*	*%*	*$m*	*%*
Foreign control										
USA	468	1.6	81,607	8.0	1,999.7	9.3	12,167.8	10.4	4,909.7	10.8
UK	718	2.5	86,374	8.4	2,079.4	9.7	12,971.0	11.1	5,171.3	11.4
Other EEC*(c)*	183	0.6	18,727	1.8	440.0	2.0	2,737.4	2.3	1,099.0	2.4
Canada	43	0.1	15,070	1.5	371.2	1.7	2,812.4	2.4	868.0	1.9
Switzerland	53	0.2	7,779	0.8	173.9	0.8	1,078.6	0.9	342.3	0.8
New Zealand	122	0.4	7,334	0.7	153.0	0.7	1,068.9	0.9	334.5	0.7
Japan	36	0.1	13,993	1.4	307.7	1.4	2,423.4	2.1	843.3	1.8
Other	69	0.2	7,085	0.7	176.0	0.8	1,014.3	0.9	430.0	0.9
Total	*1,692*	*5.9*	*237,969*	*23.2*	*5,700.9*	*26.5*	*36,273.8*	*31.1*	*13,998.2*	*30.8*
Joint foreign and Australian control	*85*	*0.3*	*9,907*	*1.0*	*226.1*	*1.1*	*1,528.5*	*1.3*	*619.5*	*1.4*
Naturalised or naturalising	*27*	*0.1*	*8,067*	*0.8*	*218.6*	*1.0*	*1,850.5*	*1.6*	*527.0*	*1.2*
Australian control	*27,042*	*93.7*	*768,844*	*75.0*	*15,370.8*	*71.4*	*76,879.0*	*66.0*	*30,364.0*	*66.7*
Total manufacturing	**28,846**	**100.0**	**1,024,787**	**100.0**	**21,516.3**	**100.0**	**116,531.8**	**100.0**	**45,508.8**	**100.0**

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.
(a) Includes working proprietors. *(b)* Excludes the drawings of working proprietors. *(c)* Includes Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands.

Summary information on foreign ownership and control in other industries is given in Chapter 26. More details on foreign ownership and control in the manufacturing industry are contained in *Foreign Ownership and Control of the Manufacturing Industry, Australia* (5322.0).

Research and Experimental Development

Details of expenditure and human resources devoted to research and experimental development (R&D) carried out by manufacturing enterprises in Australia are included in *Research and Experimental Development, Business Enterprises, Australia* (8104.0). R&D activity in the business context is systematic investigation or experimentation involving innovation or technical risk, the outcome of which is *new knowledge*, with or without a specific practical application or *new or improved* products, processes, materials, devices or services. R&D activity extends to modifications to existing products/processes. R&D activity ceases and pre-production begins when work is no longer experimental. A summary of results from the 1984–85, 1986–87 and 1988–89 Surveys of Research and Experimental Development is presented in Chapter 22.

RETAIL TRADE

Estimates of the value of retail turnover (excluding motor vehicles, parts, petrol, etc.) by industry are obtained by means of sample surveys. Prior to June 1988, these series reflect retail sales adjusted to turnover basis, and exclude the Northern Territory.

TURNOVER OF RETAIL ESTABLISHMENTS (EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.) AT CURRENT PRICES: INDUSTRIES
($ million)

Description	*1987–88*	*1988–89*	*1989–90*
Grocers, confectioners, tobacconists	19,350.5	21,178.3	23,178.2
Butchers	1,696.0	1,963.0	2,131.5
Other food stores	4,471.1	4,774.6	5,421.6
Hotels, liquor stores, licensed clubs	9,838.5	10,168.1	11,076.0
Cafes and restaurants	n.a.	3,288.3	3,956.9
Clothing and fabric stores	6,019.4	6,338.8	6,144.3
Department and general stores	8,748.8	9,226.0	9,666.1
Footwear stores	979.6	1,007.7	1,123.6
Domestic hardware stores, jewellers	2,317.5	2,659.1	2,582.2
Electrical goods stores	4,111.5	4,456.2	5,095.7
Furniture stores	1,618.7	1,664.3	1,758.2
Floor coverings stores	667.7	718.8	713.3
Pharmacies	2,477.6	2,876.9	3,298.5
Newsagents	2,563.4	2,760.7	3,017.7
Other stores	n.a.	3,762.2	4,106.8
Total	**70,880.7**	**76,842.2**	**83,269.6**

Service Industries

The 1986–87 Service Industries Survey covered ten personal and travel related industries. Most of these were also part of the 1979–80 Census of Retail and Selected Services Industries, therefore allowing some comparisons between the two periods. Data for motor vehicle hire, travel agency services and photography services have been collected for the first time.

Also collected as part of the 1986–87 Service Industries Survey were data on selected tourist attractions. A brief summary of details of this survey is available in Chapter 12, Culture, Recreation, Environment and Tourism. Further details by type of attraction are shown in *Tourist Attractions* (8661.0).

The 1987–88 Service Industries Survey covered twelve professional and business related industries. The industries included in the 1987–88 Survey have not previously been surveyed in this detail by ABS so there are no earlier statistics available to which they can be compared.

A brief summary of details of the 1986–87 and 1987–88 Surveys is contained in the table below. A list of available publications containing more detailed statistics is shown in the bibliography at the end of this chapter.

SELECTED SERVICE INDUSTRIES: SUMMARY OF OPERATIONS AUSTRALIA, 1986–87 AND 1987–88

ASIC Class	*Enterprises operating at end June*	*Persons employed at end June*	*Wages and salaries(a)*	*Turnover*	*Gross product*	*Net operating surplus*
	No.	No.	$'000	$m	$m	$m
1986–87—						
Motor vehicle hire (5711)	281	3,173	54.8	446.8	139.5	58.0
Travel agency services (5741)*(b)*	1,494	11,632	191.5	428.8	1,207.2	–0.2
Motion picture theatres (9133)	202	4,472	56.6	256.5	96.2	29.2
Cafes and restaurants (9231)	8,489	85,974	646.7	2,583.9	942.2	221.5
Hotels and bars (9232)	4,986	82,644	814.8	4,807.6	1,270.0	370.5
Accommodation (9233)	4,841	56,364	640.3	2,281.5	1,078.8	310.7
Licensed clubs (9241–3)	3,927	52,336	687.8	2,636.1	1,059.4	229.0
Laundries and dry cleaners (9340)*(c)*	1,581	12,452	142.0	400.1	228.4	56.6
Hairdressers and beauty salons (9351–2)	11,027	39,628	300.0	790.0	433.0	113.1
Photography services (9361)	1,547	4,290	36.5	183.3	67.6	23.3
1987–88—						
Real estate agents (6310)	5,741	42,196	835	2,201	1,262	356
Architectural services (6334)	4,534	17,717	354	1,030	584	185
Surveying services (6335)	1,104	6,872	116	309	178	46
Engineering and technical services (6336)*(d)*	5,190	28,326	682	1,716	1,000	223
Legal services (6371)	6,459	55,363	500	3,069	1,427	884
Accounting services (6372)	6,048	49,479	503	2,334	1,050	497
Computing services (6381)	3,691	24,067	585	1,628	775	78
Advertising services (6382)	2,390	16,048	423	4,675	619	147
Debt collecting and credit reporting services (6385)	234	2,658	52	142	69	12
Pest control services (6386)	565	2,902	44	135	76	25
Cleaning services (6387)*(e)*	4,181	44,322	330	622	434	81
Security/protection and business services n.e.c. (6388 and 6389)*(f)*	1,087	25,483	365	839	515	120

(a) Gross earnings of all employees before taxation and other deductions. Drawings of working proprietors and partners are excluded. *(b)* Includes Australian branch offices of foreign resident airlines and the travel agency divisions of the major financial institutions (mainly banks). *(c)* Excludes carpet cleaning services. *(d)* Includes quantity surveyors. *(e)* Includes carpet cleaning services. *(f)* Excludes quantity surveyors.

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1986–87 Motor Vehicle Hire, Australia (8652.0)
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1986–87 Cafes and Restaurants, Australia (8655.0)
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1986–87 Hairdressers and Beauty Salons, Australia (8659.0)
1986–87 Photography Services, Australia (8660.0)
1986–87 Tourist Attractions, Australia (8661.0)
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1987–88 Real Estate Agents Industry (8663.0)
1987–88 Architectural Services Industry (8664.0)
1987–88 Surveying Services Industry (8665.0)
1987–88 Engineering and Technical Services Industry (8666.0)
1987–88 Legal Services Industry (8667.0)
1987–88 Accounting Services Industry (8668.0)
1987–88 Computing Services Industry (8669.0)
1987–88 Advertising Services Industry (8670.0)
1987–88 Pest Control Services Industry (8671.0)
1987–88 Cleaning Services Industry (8672.0)
1987–88 Security/Protection and Other Business Services Industry (8673.0)

—Detailed statistics for the following industries are available by contacting the ABS:

- Real estate agents
- Architectural services
- Surveying services
- Engineering and technical services
- Legal services
- Accounting services
- Computing services
- Advertising services
- Debt collecting and credit reporting services
- Pest control services
- Cleaning services
- Security/protection and business services n.e.c.

19

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 are 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). An historical perspective giving more detail of these earlier indexes was published in *Year Book* No. 71.

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.

Consumer Price Index

The Consumer Price Index (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. The eight groups in turn are divided into 35 sub-groups and 107 expenditure classes.

From its inception in 1960, the CPI covered the six State capital cities. In 1964, the geographical coverage of the CPI was extended to include Canberra. From June quarter 1982, geographic coverage was further extended 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. Sub-group index numbers are published for the weighted average of eight capital cities. Expenditure class index numbers are available for each city plus the weighted average of eight capital cities.

Conceptual basis for measuring price changes

The CPI is a quarterly measure of the change in average retail price levels. It provides a method of comparing the average price level for a quarter with the average price level of the reference base year or changes in the average price level from one quarter to the next. In measuring price changes, the CPI aims to measure only pure price changes (i.e. price changes excluding the effects of any changes in the quality or quantity of the goods or services concerned)—in other words to measure, each quarter, the change in the cost of purchasing an identical basket of goods and services. The CPI is a measure of changes in transaction prices—the prices actually paid by consumers for the goods and services they buy. It is not concerned with nominal, recommended or list prices (unless they are the prices consumers actually pay).

The CPI is often loosely, and incorrectly, referred to as a cost-of-living index. However, a true cost-of-living index (if such a measure could be compiled) would not be the same thing as a fixed-weight retail price index like the CPI. A cost-of-living index would need to take account of changes in standards of living and the substitutions that consumers make in response to changing market conditions, such as changes in supply, or in response to disparate price movements.

The CPI measures price change over time and does not provide comparisons between relative price levels at a particular date. For example, it does not show whether beef is dearer than lamb, or whether bus fares are dearer than train fares. The fact that the index number for any particular component is higher than that for another component in a particular quarter does not mean that the first component is more expensive than the second—it merely means that, since the reference base year, prices for the first component have risen more than prices for the second component. Similarly, the CPI does not provide any basis for measuring relative price levels between the different cities. For example it says nothing about whether prices are higher in Sydney or Perth—it shows only whether prices have changed more in Sydney or in Perth.

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; metropolitan means the eight capital city Statistical Divisions.

Weighting pattern

Each of the 107 expenditure classes in the current CPI has a fixed weight (i.e. the measure of its relative importance). Details of the weighting pattern are shown in the following table. More detailed information on weighting is published in *The Australian Consumer Price Index: Concepts, Sources and Methods* (6461.0).

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 eleven separate series which have been linked to form a continuous series. The eleventh series (i.e. the current series) was introduced in the March quarter 1987, with a weighting pattern based on estimated household expenditure in 1984.

The CPI 'basket of goods and services' covers items which are considered representative of metropolitan households' spending habits and whose prices can be associated with an identifiable and specific quantity of a commodity or service. 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 any goods or services.

CONSUMER PRICE INDEX—ELEVENTH SERIES: WEIGHTING PATTERN AT DECEMBER QUARTER 1986 WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES

Groups and sub-groups	*Percentage contribution to the all groups CPI*
Food	**19.013**
Dairy products	1.536
Cereal products	1.978
Meat and seafoods	3.495
Fresh fruit and vegetables	1.921
Processed fruit and vegetables	0.852
Soft drinks, ice cream and confectionery	2.829
Meals out and take away foods	4.671
Other food	1.731
Clothing	**6.898**
Men's and boys' clothing	1.952
Women's and girls' clothing	3.102
Fabrics and knitting wool	0.499
Footwear	1.107
Dry cleaning and shoe repairs	0.238
Housing	**14.062**
Rents	4.450
Home ownership	9.612
Household Equipment and Operation	**18.429**
Fuel and light	2.442
Furniture and floor coverings	4.115
Appliances	1.535
Household textiles	0.690
Household utensils and tools	1.748
Household supplies and services	3.918
Postal and telephone services	1.478
Consumer credit charges	2.503
Transportation	**17.025**
Private motoring	16.069
Urban transport fares	0.956
Tobacco and Alcohol	**8.173**
Alcoholic drinks	5.955
Cigarettes and tobacco	2.218
Health and Personal Care	**5.596**
Health services	2.992
Personal care products	1.943
Hairdressing services	0.661
Recreation and Education	**10.804**
Books, newspapers and magazines	1.229
Recreational goods	2.877
Holiday travel and accommodation	3.135
Recreational services	2.305
Education and child care	1.258
Total All Groups	**100.000**

Collecting prices

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 normally purchase goods and services. This involves collecting prices from many sources including supermarkets, department stores, footwear stores, restaurants, motor vehicle dealers and service stations, dental surgeries, hotels and clubs, schools, hairdressers, travel agents, airlines, bus operators, house builders, real estate developers, electricians and plumbers. 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 100,000 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 are collected annually (e.g. seasonal clothing, local government rates and charges).

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

Since the CPI aims to measure the price change of a constant basket of goods and services over time it is necessary 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.

CONSUMER PRICE INDEX NUMBERS: AUSTRALIA AND OTHER COUNTRIES(*a*)
(Base of each index: Year 1980 = 100.0)

Period	*Australia (b)*	*Canada*	*Federal Republic of Germany(c)*	*Indonesia*	*Japan*	*New Zealand*	*United Kingdom*	*United States of America*
Year—								
1984	140	138	n.a.	152	112	153	133	126
1985	149	143	n.a.	159	115	176	142	131
1986	162	149	100	168	115	200	146	133
1987	176	156	100	184	115	231	152	138
1988	189	162	101	199	116	246	160	144
1989	203	170	104	n.a.	119	n.a.	172	151
Quarter—								
1988—								
Sept.	191	163	123	201	116	244	161	145
Dec.	195	164	123	203	117	250	165	146
1989—								
Mar.	196	166	103	206	117	252	167	148
June	201	169	104	211	119	255	172	150
Sept.	206	172	104	n.a.	119	264	174	151
Dec.	210	173	105	n.a.	120	n.a.	177	153

(*a*) The composition of these indexes varies considerably in the various countries. The index numbers show changes in prices in each country over time and do not measure relative price levels between countries. (*b*) Consumer Price Index (All Groups) converted to base: 1980 = 100.0. *Source*: Monthly Bulletin of Statistics of the Statistical Office of the United Nations. (*c*) Base : 1985 = 100.

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 March 1987. Previous revisions of the CPI were introduced at: December quarter 1963; December quarter 1968; December quarter 1973; September quarter 1974; September quarter 1976; and March quarter 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.

CONSUMER PRICE INDEX: ALL GROUPS INDEX NUMBERS
(Base of each index: Year 1980–81 = 100.0)*(a)*

Year	*Sydney*	*Mel-bourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Canberra*	*Darwin*	*Weighted average of eight capital cities*
1979–80	91.1	91.4	91.5	91.6	91.9	91.6	91.1	..	*(b)*91.4
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
1985–86	147.5	149.8	149.0	150.2	147.1	147.9	150.8	146.2	148.7
1986–87	161.4	163.9	161.8	164.0	161.8	162.5	163.4	159.3	162.6
1987–88	173.7	175.9	173.1	175.0	173.3	174.4	174.7	170.6	174.5
1988–89*(c)*	187.7	187.9	185.4	187.8	186.1	185.3	186.3	178.9	187.3

(a) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities. *(b)* Prior to 1980–81 index numbers are for weighted average of six State capital cities. *(c)* These series have been affected by a change in the treatment of mortgage interest charges from March Quarter 1989.

CONSUMER PRICE INDEX: GROUP INDEX NUMBERS
WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES
(Base of each index: Year 1980–81 = 100.0 unless otherwise noted)

Year	*Food*	*Clothing*	*Housing*	*Household equipment and operation*	*Transport-ation*	*Tobacco and alcohol*	*Health and personal care*	*Recreation and educ-ation(a)*	*All groups*
1979–80*(b)*	90.6	93.3	91.0	90.0	91.3	93.6	91.1	..	91.4
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
1985–86	144.7	139.0	153.4	150.2	155.5	165.1	133.0	129.5	148.7
1986–87	156.3	152.3	164.8	161.2	172.9	182.5	154.4	141.5	162.6
1987–88	164.5	164.2	176.2	172.4	186.4	197.8	171.9	152.6	174.5
1988–89*(c)*	179.9	175.9	198.4	182.2	193.7	209.1	186.3	162.1	187.3

(a) Base: March quarter 1982 = 100.0. Group index not compiled for earlier quarters. *(b)* Prior to 1980–81 index numbers are for weighted average of six State capital cities. *(c)* Series for Housing and all groups have been affected by a change in the treatment of mortgage interest charges from March Quarter 1989.

Long-term linked series

To provide an approximate long-term measure of retail price change for the period since the first Australian retail price index was compiled, a single series of index numbers has been constructed by linking together selected retail price index series from amongst those described above. The index numbers are expressed on a reference base 1945 = 100, which was the end of a period of relative price stability during World War II. The successive series linked together to produce this long-term series of index numbers are:

- from 1901 to 1914, the A Series Index;
- from 1914 to 1946–47, the C Series Index;
- from 1946–47 to 1948–49, a combination of the C Series Index (excluding rent) and the housing group of the CPI; and
- from 1948–49 onwards, the CPI.

A considerable range of information on retail prices both in the form of index numbers and average retail prices, for various localities in Australia (in some cases back to 1901) is available in the *Labour Report*, published by the ABS continuously from 1912 to 1973. Various editions of the *Labour Report* also contained detailed descriptions of the methodology used in compiling the various indexes and details of their composition and weighting. A comprehensive description of the C Series Index, including details of its composition and weighting, was last published in *Labour Report* No. 41 in 1952. Descriptive material on the Interim Retail Price Index was last published in *Labour Report* No. 46 in 1958.

RETAIL PRICE INDEX NUMBERS—AUSTRALIA(*a*)
LONG TERM LINKED SERIES
(Base: Year 1945 = 100)

Year	*Index number*	*Year*	*Index number*	*Year*	*Index number*
1901	47	1931	78	1961	252
1902	50	1932	74	1962	251
1903	49	1933	71	1963	252
1904	46	1934	73	1964	258
1905	48	1935	74	1965	268
1906	48	1936	75	1966	276
1907	48	1937	78	1967	286
1908	51	1938	80	1968	293
1909	51	1939	82	1969	302
1910	52	1940	85	1970	313
1911	53	1941	89	1971	332
1912	59	1942	97	1972	352
1913	59	1943	101	1973	385
1914	61	1944	100	1974	443
1915	70	1945	100	1975	510
1916	71	1946	102	1976	579
1917	75	1947	106	1977	650
1918	80	1948	117	1978	702
1919	91	1949	128	1979	766
1920	103	1950	140	1980	844
1921	90	1951	167	1981	926
1922	87	1952	196	1982	1,028
1923	89	1953	205	1983	1,132
1924	88	1954	206	1984	1,177
1925	88	1955	211	1985	1,257
1926	90	1956	224	1986	1,370
1927	89	1957	229	1987	1,487
1928	89	1958	233	1988	1,594
1929	91	1959	237	1989	1,714
1930	87	1960	245		

(*a*) The index numbers relate to the weighted average of six State capital cities up to 1980; from 1981 they relate to the weighted average of eight capital cities.

Average retail prices

Average retail prices for a range of selected (mainly food) items have been published regularly since 1901. Since 1962, data on average retail prices in each of the capital cities have been published quarterly in *Average Retail Prices of Selected Items* (6403.0).

Prior to that date information was published in the annual *Labour Report* (now discontinued).

Indexes of relative retail prices of food

Since 1962 the ABS has conducted an annual survey of food prices in selected cities and towns throughout Australia. Information from this survey is used to compile index numbers measuring the relative levels of food prices in the different localities at the time the survey is conducted (currently in May each year). The index numbers are produced by combining the prices for the selected food items using a common set of weights (derived from the weighting pattern of the CPI Food Group). The resulting index numbers are expressed on the base: Weighted Average of Eight Capital Cities = 100.

Index numbers for localities in the States are available from the ABS on request.

House price indexes

House price indexes are compiled for use in calculating the mortgage interest charges component of the CPI. Separate indexes are constructed for *Established houses* and *Project homes* and these are published quarterly for each of the eight capital cities in *House Price Indexes: Eight Capital Cities* (6416.0).

PRODUCER AND WHOLESALE PRICE INDEXES

Historical perspective

The first price index of this kind compiled by the ABS was the Melbourne Wholesale Price Index which was introduced in 1912 with index numbers compiled back to 1861 from prices extracted from newspapers and trade publications. Index numbers were compiled up to 1961. The index related chiefly to basic materials and foods weighted in accordance with consumption in about the year 1910 and neither the list of items nor the weighting was varied during the life of the index. A description of the index and a list of the commodities included was last published in *Labour Report* No. 38, 1949.

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. The index related to commodities in their basic or primary form and prices were obtained as near as possible to the point where they made their first effective impact on the local price structure. With few exceptions, prices were obtained from Melbourne sources. The weights were based on estimates of the average annual consumption of the commodities in Australia during the period 1928–29 to 1934–35 inclusive. A list of the commodities and other information concerning the index was last published in *Labour Report* No. 53, 1967.

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 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 Indexes of Materials Used in Manufacturing Industries;
- Price Indexes of Articles Produced by Manufacturing Industry;
- Price Indexes of Materials Used in Coal Mining; and
- Price Indexes of Copper Materials.

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, the Price Indexes of Articles Produced by Manufacturing Industry and the Price Indexes of Materials Used in Coal Mining. Average monthly prices are mainly used to compile the Price Indexes of Materials Used in Manufacturing Industries.

Following is a table giving a broad indication of long-term price changes, drawing on the producer and wholesale price indexes available, on a common reference base: Year 1968–69 = 100.0. The Melbourne Wholesale Price Index and the Wholesale Price (Basic Materials and Foodstuffs) Index have been linked at 1928–29 to provide a continuous series.

PRODUCER AND WHOLESALE PRICE INDEXES
(Reference base: Year 1968–69 = 100.0)

	Melbourne Wholesale Price Index (All Groups)	*Wholesale Price (Basic Materials and Foodstuffs) Index (All Groups)*	*Price Index of Materials used in House Building (All Groups)*	*Price Index of Materials used in Building Other than House Building (All Groups)*	*Price Indexes of Materials used in Manufacturing Industries (Manufacturing Division)*	*Price Indexes of Articles Produced by Manufacturing Industry (Manufacturing Division)*
1861	24.2	..	..	..	..	..
1871	19.3	..	..	..	..	..
1881	17.6	..	..	..	..	..
1891	14.9	..	..	..	..	..
1901	15.3	..	..	..	..	..
1911	15.7	..	..	..	..	..
1921	30.0	..	..	..	..	..
1928–29	28.3	28.3	..	..	..	..
1931–32	..	24.4	..	..	..	..
1936–37	..	25.5	..	..	..	..
1941–42	..	31.9	..	..	..	..
1946–47	..	37.0	..	..	..	..
1951–52	..	37.0	..	..	..	..
1956–57	..	76.4	..	..	..	..
1960–61	..	92.5	..	..	..	..
1961–62	..	86.4	..	..	..	..
1962–63	..	87.4	..	..	..	..
1963–64	..	90.0	..	..	..	..
1964–65	..	91.3	..	..	..	..
1965–66	..	95.4	..	..	..	..
1966–67	..	98.4	94.1	94.7	..	..
1967–68	..	99.7	96.6	96.8	..	..
1968–69	..	100.0	100.0	100.0	100.0	100.0
1969–70	..	101.3	104.3	104.6	102.6	103.9
1970–71	..	..	108.8	109.4	100.1	108.5
1971–72	..	..	115.4	116.5	102.6	113.9
1972–73	..	..	123.3	122.1	113.9	120.7
1973–74	..	..	142.3	138.1	134.7	134.6
1974–75	..	..	172.5	169.7	145.1	158.1
1975–76	..	..	195.8	195.3	158.6	177.8
1976–77	..	..	219.1	218.1	182.2	196.9
1977–78	..	..	237.1	236.5	198.5	213.8
1978–79	..	..	252.2	253.9	248.8	237.4
1979–80	..	..	284.9	286.9	321.8	274.9

PRODUCER AND WHOLESALE PRICE INDEXES
(Reference base: Year 1968–69 = 100.0)—*continued*

	Melbourne Wholesale Price Index (All Groups)	*Wholesale Price (Basic Materials and Foodstuffs) Index (All Groups)*	*Price Index of Materials used in House Building (All Groups)*	*Price Index of Materials used in Building Other than House Building (All Groups)*	*Price Indexes of Materials used in Manufacturing Industries (Manufacturing Division)*	*Price Indexes of Articles Produced by Manufacturing Industry (Manufacturing Division)*
1980–81	..	..	323.6	323.9	353.2	305.2
1981–82	..	..	355.3	359.8	358.9	328.9
1982–83	..	..	389.0	400.6	388.0	360.2
1983–84	..	..	419.2	422.7	402.1	382.8
1984–85	..	..	452.4	446.2	422.2	404.8
1985–86	..	..	484.6	481.8	442.9	430.3
1986–87	..	..	512.7	519.0	445.0	458.5
1987–88	..	..	551.7	564.7	470.3	492.1
1988–89	..	..	611.3	616.6	477.5	526.0

Price Index of Materials Used in House Building

The Price Index of Materials Used in House Building was first compiled on a reference base 1966–67 = 100.0, using a weighting pattern derived from estimated material usage in 1968–69. Monthly index numbers on a 1966–67 = 100.0 reference base are available for the period July 1966 to September 1986. A detailed description of the first series, including its composition and weighting pattern, is given in the September 1970 issue of the publication *Price Index of Materials Used in House Building* (6408.0) and in *Labour Report* No. 55, 1970.

The current Price Index of Materials Used in House Building for the six State capital cities, on a reference base 1985–86 = 100.0, was introduced in October 1986 and linked to the previous series. The items included, and their weights, were derived from reported values of each material used in selected representative houses constructed in 1985–86. The index for Canberra was introduced in respect of February 1988 on a reference base of 1986–87 = 100.0. Further information concerning the method of compiling the index, including details of its composition and weighting pattern, is given in the October 1986 and February 1988 issues of the publication *Price Index of Materials Used in House Building* (6408.0).

PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING
SIX STATE CAPITAL CITIES AND CANBERRA*(a)*
(Base of each index: Year 1985–86 = 100.0)

Year(b)	*Weighted average of six State capital cities*	*Sydney*	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Canberra*
1983–84	86.0	85.8	88.7	85.4	87.9	83.1	86.5	n.a.
1984–85	93.1	93.3	94.6	92.7	93.4	92.5	93.4	n.a.
1985–86	100.0	100.0	100.0	100.0	100.0	100.0	100.0	n.a.
1986–87	105.8	106.2	105.7	104.6	105.1	106.7	105.0	100.0
1987–88	113.8	114.8	114.3	112.0	110.8	114.2	110.7	109.7
1988–89	126.1	128.4	125.8	123.8	120.9	128.1	120.0	121.0

(a) The separate city indexes measure price movement within each city individually. They do not compare price levels between cities. *(b)* The index series for years prior to 1985–86 are based on the series previously published on a reference base 1966–67 = 100.0. They have been converted to reference base 1985–86 = 100.0 by linking the old and new series at September 1986.

Price Index of Materials Used in Building Other than House Building

The Price Index of Materials Used in Building Other than House Building was first compiled on a reference base 1966–67 = 100.0, using a weighting pattern derived from estimated materials usage in 1966–67. 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 first series, including its composition and weighting pattern, is given in the publications *Price Index of Materials Used in Building Other than House Building*, January 1969 (6407.0) and *Labour Report* No. 54, 1969.

The current 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. The index for Canberra was first published in respect of November 1987 on a reference base of 1986–87 = 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, including details of its composition and weighting pattern can be obtained from the February 1981, September 1982 and November 1987 issues of the publication *Price Index of Materials Used in Building Other than House Building* (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* (6407.0).

PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING EIGHT CAPITAL CITIES(*a*)

	Weighted average of six State capital cities	*Sydney*	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Darwin*	*Canberra*
Base year				1979–80 = 100.0				*(b)*	*(c)*
1983–84	147.3	148.1	143.4	151.7	152.6	145.4	145.7	118.3	n.a.
1984–85	155.5	155.5	152.8	159.4	160.8	153.2	153.5	122.0	n.a.
1985–86	167.9	167.4	165.2	169.6	174.9	168.1	167.2	131.1	n.a.
1986–87	180.9	181.0	177.8	179.7	187.9	183.9	177.9	139.6	100.0
1987–88	196.8	197.5	192.6	194.4	204.7	201.5	188.9	149.3	111.5
1988–89	214.9	214.7	211.6	213.7	220.7	221.8	204.7	161.7	122.3

(a) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities. *(b)* 1981–1982 = 100.0. *(c)* 1986–87 = 100.0.

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*
1983–84	144.9	151.6	149.6	145.3	141.4	148.6
1984–85	160.6	162.9	158.6	150.8	147.6	148.2
1985–86	172.2	173.7	162.6	157.1	158.0	156.8
1986–87	178.6	183.0	167.7	166.8	170.9	165.8
1987–88	184.2	193.7	175.6	181.5	186.2	176.2
1988–89	208.2	221.2	193.7	199.6	204.3	193.1

	Aluminium windows	*Conductors (mains cable and circuitry)*	*Lamps and light fittings*	*Non-ferrous pipes*	*Builders' hardware*	*Paint*
1983–84	144.2	150.3	145.1	113.7	154.8	162.2
1984–85	152.7	171.9	151.0	122.1	163.8	177.0
1985–86	162.4	197.0	164.0	134.5	182.2	189.3
1986–87	174.2	216.3	180.4	142.4	200.9	201.9
1987–88	192.1	301.3	193.5	183.3	214.7	208.9
1988–89	210.0	369.7	206.2	209.7	235.6	228.4

Price Indexes of Materials Used in Manufacturing Industries

The Price Index of Materials Used in Manufacturing Industry was first compiled on a reference base 1968–69 = 100.0, using a weighting pattern derived from estimated manufacturing usage in 1971–72. Monthly index numbers on a 1968–69 = 100.0 reference base are available for the period July 1968 to November 1985. A description of the first series, including its composition and weighting pattern, is given in the April 1975 issue of the publication *Price Index of Materials Used in Manufacturing Industry* (6411.0).

The current Price Indexes of Materials Used in Manufacturing Industries were introduced in December 1985 on a reference base 1984–85 = 100.0. Details of their composition and weighting pattern are given in the December 1985 issue of the publication *Price Indexes of Materials Used in Manufacturing Industries* (6411.0). With a few exceptions the items included in the indexes were allocated weights in accordance with the estimated value of manufacturing usage in 1977–78.

These indexes measure changes in prices of materials (including fuels) used by establishments classified to the Manufacturing Division of the Australian Standard Industrial Classification 1983 (ASIC). The indexes are on a net 'sector' basis; that is, each relates only to those materials which are used in the defined sector of Australian manufacturing industry and which have been produced by establishments outside that sector. The following sector price indexes are published:

(i) a net index for the Manufacturing Division of ASIC; and

(ii) net indexes for ten sub-divisions and four groups within the Manufacturing Division.

In addition, indexes are published for selected categories of materials, some of which are presented below.

PRICE INDEXES OF MATERIALS USED IN MANUFACTURING INDUSTRIES(a): SELECTED CATEGORIES OF MATERIALS
(Base of each index: Year 1984–85 = 100.0)(b)

	Imported materials				Home produced materials				
	Agricultural	Mining	Manufactured	Total imported materials	Agricultural, forestry and fishing	Mining	Electricity	Total home produced materials	All materials
1983–84	92.8	92.5	91.2	91.8	98.0	95.3	97.1	96.9	95.3
1984–85	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1985–86	117.3	91.5	117.7	111.8	100.6	101.4	102.9	101.2	104.9
1986–87	126.0	68.9	131.7	117.3	109.3	89.3	107.4	99.1	105.4
1987–88	106.5	67.9	136.4	120.0	118.3	96.3	112.3	106.8	111.4
1988–89	95.3	56.7	135.8	116.5	131.0	93.6	118.3	111.3	113.1

(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. *(b)* The index series for years prior to 1984–85 are based on the series previously published on reference base 1968–69 = 100.0. They have been converted to reference base 1984–85 = 100.0 by linking the old and new series in the year 1984–85.

Price Indexes Of Materials Used In Coal Mining

The Price Indexes of Materials Used in Coal Mining are compiled on a reference base 1987–88 = 100.0, using a weighting pattern derived from estimated materials usage in the operation of open cut and underground coal mines in the three years ended June 1987.

A description of this series, including its composition and weighting pattern, is given in the publication *Price Indexes of Materials Used in Coal Mining*, November 1988 (6415.0).

Index series are published which measure price movements in materials used in open cut and underground coal mining operations separately. For the purpose of these indexes, coal mining operations encompass the removal of overburden, the extraction, washing and preparation of the coal and its transportation to the rail head. Materials are defined to be those consumable and replacement parts normally used up in these activities. Items of capital equipment are not included within the scope of the index.

The Open Cut and Underground indexes enable comparisons to be drawn between them as to the differences in degree of price movement from period to period. They do not measure differences in price levels between the two types of mining.

PRICE INDEXES OF MATERIALS USED IN COAL MINING
(Base of each index: Year 1987–88 = 100.0)

	Open cut	Underground
1987–88	100.0	100.0
1988–89	99.9	106.8

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) a net index for each of the twelve sub-divisions within the Manufacturing Division.

The reference base of the indexes is the year 1968–69 = 100.0. Their composition and weighting reflect estimated net sector production in the year 1971–72.

The items included in the indexes are combined for publication purposes using the structure of ASIC.

Further information concerning the method of compiling monthly index numbers for each index, including details of their composition and weighting, is shown in the June 1976 issue of the publication *Price Indexes of Articles Produced by Manufacturing Industry* (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)

Year	All Manufacturing Industry Index(c)	Net subdivision indexes(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)
1983–84	382.8	355.5	305.8	333.2	455.4	413.6	456.8
1984–85	404.8	377.0	322.6	352.1	494.3	442.2	480.8
1985–86	430.3	399.1	348.2	376.7	530.4	472.4	499.9
1986–87	458.5	428.9	383.5	407.2	569.7	513.4	467.9
1987–88	492.1	454.5	436.6	434.3	609.6	549.3	496.5
1988–89	526.0	486.5	461.5	467.6	667.8	573.1	495.9

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)
1983–84	404.0	365.5	480.1	358.9	372.6	342.1
1984–85	429.2	381.0	505.3	378.7	390.2	361.4
1985–86	449.8	396.4	534.4	417.5	417.6	388.1
1986–87	473.7	422.5	566.9	479.9	449.6	424.2
1987–88	504.5	471.9	597.8	528.0	484.5	466.2
1988–89	548.1	521.2	646.2	562.3	517.3	497.6

(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)* 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. *(c)* 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.

FOREIGN TRADE PRICE INDEXES

Historical Perspective

Export Price Index

An index of export prices has been published by the ABS since 1901. The first index was compiled annually from 1901 to 1916–17 as a current weighted unit value index.

The method of calculation was changed in 1918 to incorporate fixed weights. Weights for all principal exports were calculated based on the average quantities of exports for the period January 1897 to June 1916. These weights were applied to the average unit values of each export in successive years, and a weighted average index of 'price' movements was derived. This index was published for the years 1897 to 1929–30.

An index of export prices was not published again until 1937 when two new series of monthly export price indexes were published, compiled back to 1928. One index used fixed weights and the other used changing weights. The most important methodological change introduced with these indexes was the use of actual export prices in place of unit values. The indexes were compiled until 1962.

The next index was introduced in August 1962 with index numbers compiled back to July 1959. This was a fixed weights index with reference base 1959–60 = 100.0. The weights were based on the average annual value of exports during the five years 1956–57 to 1960–61. By 1969–70 there had been a substantial shift in the relative importance of commodities exported and from July 1969 a new interim series was linked to this index, still with reference base 1959–60 = 100.0, but using weights based on the annual value of exports in 1969–70. Four new commodities—iron ore, bauxite, alumina and mineral sands were included. The interim index was published until June 1979 when it was replaced by the current Export Price Index.

Import Price Index

The first issue of the Import Price Index produced by the ABS was released in May 1983 with index numbers compiled from September quarter 1981 onwards, on a reference base 1981–82 = 100.0. This index replaced an import price index previously published by the Reserve Bank of Australia on a reference base 1966–67 = 100.0. The Reserve Bank's import price index was published from 1928 until September 1982.

A table giving a broad indication of long term price changes, drawing on the foreign trade price indexes available, is given below.

FOREIGN TRADE PRICE INDEXES
(Reference base: Year 1968–69 = 100)

Year	Export Price Index (All Groups)	Import Price Index (All Groups)	Year	Export Price Index (All Groups)	Import Price Index (All Groups)
1901	15	..	1970–71	99	108
1911	17	..	1971–72	102	114
1921–22	25	..	1972–73	131	113
1931–32	18	22	1973–74	157	131
1936–37	29	21	1974–75	177	189
1941–42	27	35	1975–76	193	214
1946–47	53	51	1976–77	216	246
1951–52	123	92	1977–78	227	278
1956–57	115	91	1978–79	256	307
1960–61	93	95	1979–80	309	403
1961–62	94	94	1980–81	328	450
1962–63	99	94	1981–82	332	458
1963–64	112	96	1982–83	360	506
1964–65	103	97	1983–84	369	524
1965–66	105	99	1984–85	396	580
1966–67	103	100	1985–86	417	659
1967–68	98	99	1986–87	431	731
1968–69	100	100	1987–88	469	742
1969–70	101	103	1988–89	501	694

Source: The sources used for the Import Price Index are the *Reserve Bank of Australia Bulletin* up to and including 1981–82, and the ABS *Import Price Index* (6414.0) thereafter.

Current indexes

The ABS compiles price indexes for merchandise imported into and exported from Australia. The Export Price Index is compiled and published monthly while the Import Price Index is compiled and published quarterly. 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. 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.

Import Price Index

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 AICC and BEC are presented below.

Further information concerning the method of compiling the index, including details of its composition and weighting pattern, can be obtained from the December quarter 1982 issue of the publication *Import Price Index* (6414.0). More detailed index numbers are shown quarterly in this publication.

IMPORT PRICE INDEX: INDEX NUMBERS BASED ON THE AUSTRALIAN IMPORT COMMODITY CLASSIFICATION (AICC)
(Base of each index: Year 1981–82 = 100.0)

AICC Section	*1986–87*	*1987–88*	*1988–89*
(0) Food and live animals chiefly for food	178.8	162.4	149.8
(1) Beverages and tobacco	189.4	192.2	183.0
(2) Crude materials, inedible, except fuels	148.0	153.4	161.7
(3) Mineral fuels, lubricants and related materials	69.3	75.1	60.3
(4) Animal and vegetable oils, fats and waxes	99.8	105.4	102.5
(5) Chemicals and related products n.e.s.	145.6	153.0	152.1
(6) Manufactured goods classified chiefly by material	169.4	173.4	167.9
(7) Machinery and transport equipment	191.4	191.9	177.0
(8&9 part) Miscellaneous manufactured articles and non-monetary gold	177.8	178.7	167.8
All groups	**159.6**	**162.0**	**151.6**

IMPORT PRICE INDEX: INDEX NUMBERS FOR BROAD ECONOMIC CATEGORIES (BEC) AND END USE CLASSES
(Base of each index: Year 1981–82 = 100.0)

	1986–87	*1987–88*	*1988–89*
Broad Economic Categories			
Food and beverages	172.3	160.3	149.0
Industrial supplies n.e.s.	157.6	163.3	161.6
Fuels and lubricants	69.3	75.1	60.3
Capital goods (except transport equipment) and parts and accessories thereof	182.3	181.5	166.2
Transport equipment and parts and accessories thereof	215.2	218.4	205.1
Consumer goods n.e.s.	171.5	171.8	161.6
End Use Classes			
Capital goods	187.7	187.7	174.6
Intermediate goods	139.8	143.2	134.7
Consumption goods	180.7	182.2	170.4

Export Price Index

The current 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, including details of its composition and weighting pattern, can be obtained from the July 1979 issue of *Export Price Index* (6405.0). More detailed index numbers are shown monthly in this publication.

EXPORT PRICE INDEX: INDEX NUMBERS BASED ON AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION (ASIC)
(Base of each index: Year 1974–75 = 100)

	ASIC Divisions		
Year	*Agriculture, forestry, fishing and hunting (A)*	*Mining (B)*	*Manufacturing (C)*
1983–84	169	244	212
1984–85	182	265	226
1985–86	184	290	237
1986–87	182	298	251
1987–88	240	267	277
1988–89	266	266	298

EXPORT PRICE INDEX: INDEX NUMBERS BASED ON AUSTRALIAN EXPORT COMMODITY CLASSIFICATION (AECC)
(Base of each index: Year 1974–75 = 100)

		AECC Sections				
Year	*All groups*	*Food and live animals (0)*	*Crude materials inedible (except fuels) (2)*	*Mineral fuels and lubricants (3)*	*Animal and vegetable oils and fats (4)*	*Chemicals and other manufactured exports (5, 6, 7 and 8)*
1983–84	208	163	242	269	168	203
1984–85	223	171	264	288	211	216
1985–86	235	180	277	308	183	229
1986–87	243	185	296	280	160	249
1987–88	265	186	357	244	176	278
1988–89	283	206	383	228	173	301

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Price Index of Materials Used in Building Other Than House Building (6407.0)
Price Index of Materials Used in House Building (6408.0)
Price Index of Copper Materials (6410.0)
Price Indexes of Materials Used in Manufacturing Industries (6411.0)
Price Indexes of Articles Produced by Manufacturing Industry (6412.0)
Import Price Index (6414.0)
House Price Indexes: Eight Capital Cities (6416.0)
Price Indexes of Materials Used in Coal Mining (6415.0)
Information Paper: Review of the Price Indexes of Articles Produced by Manufacturing Industry (6418.0)

20

HOUSING AND CONSTRUCTION

HOUSING

Adequate, affordable housing has been identified as a priority of Australian Governments with the establishment of a National Housing Strategy in June, 1990.

Since Federation, Australian Governments have encouraged home ownership through their policies. A high level of home ownership is seen as promoting a stable, healthy and productive society. In addition, a strong housing construction industry provides substantial employment both within the industry and in associated sectors of the economy, such as banking, real estate and manufacturing.

This chapter outlines the principal sources of data concerning housing and construction in Australia.

Census Dwellings

The 1991 Census of Population and Housing is to be conducted on the night of 6 August.

At each Census there have been a number of questions relating to dwellings. For the 1986 Census, dwellings were classified into basic groups. An *occupied private dwelling* is defined as any habitation occupied by a household, that is, a group of people living together as a domestic unit or a person living alone, and can comprise the whole or only part of a structure. An *unoccupied private dwelling* is any habitable structure built specifically for private living purposes which is unoccupied at the time of the census. *Occupied caravans etc. in caravan parks* are treated as separated households, occupied boats in marinas are included in this dwellings classification. *Non-private dwellings* are defined as dwellings with accommodation which is not included in the previous classifications. These dwellings are classified according to their function and include schools, hotels, hospitals, gaols, nursing homes and other communal dwellings.

Extensive information on dwellings obtained from censuses is available in detailed tables issued for each individual census. 1986 Census publications are listed in the ABS *Catalogue of Publications and Products* (1101.0). The most relevant series of publications from the 1986 Census is *Census 86—Summary Characteristics of Persons and Dwellings* (2479.0–2487.0). More detailed dwellings information is available on microfiche. Tables are listed in the *Catalogue of 1986 Census Tables* (2175.0).

DWELLINGS, BY STATE: CENSUS YEARS

State or Territory	Census 30 June 1981 Occupied(a)	Census 30 June 1981 Unoccupied	Census 30 June 1986 Occupied(a)(b)	Census 30 June 1986 Caravans, etc.(c)	Census 30 June 1986 Unoccupied
New South Wales	1,669,594	153,251	1,817,392	21,916	174,467
Victoria	1,243,451	124,522	1,351,118	9,475	143,264
Queensland	703,964	83,366	838,122	27,310	94,714
South Australia	433,841	42,407	474,456	3,162	48,546
Western Australia	405,997	42,100	458,762	10,749	53,851
Tasmania	136,269	17,765	149,484	658	19,470
Northern Territory	29,563	2,368	39,779	3,456	3,639
Australian Capital Territory	68,740	3,963	79,363	368	5,588
Australia	**4,691,419**	**469,742**	**5,208,476**	**77,094**	**543,539**

(a) Includes non-private dwellings. *(b)* Excludes caravans, etc. in caravan parks. *(c)* Includes occupied caravans, tents, cabins, etc., in caravan parks and occupied boats in marinas.

Commonwealth and State Government Housing Assistance

A range of assistance programs has been developed to target assistance to households in the owner-occupied, public housing and private rental housing sectors. The Government provides funds for public housing, supported accommodation services, crises accommodation, mortgage and rent relief and home purchase assistance to individuals and families.

The bulk of Commonwealth financial assistance for housing has been provided through the First Home Owners Scheme (FHOS) and the Commonwealth–State Housing Agreement (CSHA).

First Home Owners Scheme

The First Home Owners Scheme was introduced on 1 October 1983. For details of FHOS *see Year Book* No. 73. After assessing changing patterns in home purchase assistance and wide regional variations in home prices the Commonwealth Government abolished the scheme in the 1990 Budget. In its place the Commonwealth now provides funding to State and Territory Governments for assisting lower income people to buy their homes. Assistance to eligible and approved persons will continue to be paid after 22 August, 1990. The scheme's operations for 1989–90 are set out in the following table.

FIRST HOME OWNERS SCHEME: OPERATIONS

State	Number of applications Received	Number of applications Approved	Amount of benefit approval ($'000)	Amount of benefit paid ($'000)
		1989–90		
New South Wales	7,512	7,076	25,177	34,410
Victoria	5,692	5,180	17,487	26,232
Queensland	5,082	4,683	16,463	22,030
South Australia	3,537	3,127	11,113	12,914
Western Australia	3,235	2,775	9,731	14,684
Tasmania	999	951	3,115	4,111
Northern Territory	80	72	224	430
Australian Capital Territory*(a)*	1,169	1,146	4,021	4,904
Australia	**27,306**	**25,010**	**87,351**	**119,715**
		1 OCTOBER 1983 TO 30 JUNE 1990		
Australia	**410,336**	**358,641**	**1,529,857**	**1,389,339**

(a) ACT data include a large area of southern New South Wales handled by the FHOS office in Canberra.

1989 Commonwealth–State Housing Agreement—CSHA

A new Commonwealth State Housing Agreement (CSHA), covering all States, the Northern Territory and for the first time the Australian Capital Territory, commenced operation on 1 July 1990. The Agreement will run for a 10 year period and be reviewed every three years.

From 1989–90 onwards, all Commonwealth funds will be provided in the form of grants rather than as a combination of grants and concessional Loan Council borrowings. In 1989–90, and in each of the years 1990–91 to 1992–93, the Commonwealth will provide a guaranteed minimum level of funding of $1,028.176 million to the States and Territories. Of this amount, in 1990–91, $792.931 million will be provided as untied grants and the remaining $235.245 million will be allocated to specific purpose programs ($49.273 million to rental assistance for pensioners, $91 million for rental assistance for Aboriginals, $30.914 million for the Mortgage and Rent Relief Scheme, $39.655 million for the Crisis Accommodation Program and $24.403 million to the Local Government and Community Housing Program).

In addition to the change to the composition of Commonwealth funding, the distribution of those funds which were previously available through the Loan Council will also change. The distribution of all funds will move to a per capita basis over the four years to 1992–93 to better reflect need.

A further change to funding arrangements which is designed to ensure that no additional debt is created in the system is the requirement for States to match half the level of Commonwealth untied grant funds with their own grant funds. This requirement will be phased in over the first four years of the new Agreement. The other half of States' matching obligation is to be met through the provision of home purchase assistance loans. Of the specific purpose programs, only funding provided under the Mortgage and Rent Relief Scheme is required to be matched.

The Agreement also includes a joint Commonwealth–State planning process to ensure that priorities for all groups such as youth, people with disabilities, Aboriginals and the aged are met under public housing arrangements. A key component of this planning process is consultation with the community. Key issues which will be addressed in this process include national consistency in eligibility criteria and rent principles, a strengthening of the CSHA's position with respect to the security of tenure of public tenants, increased choice of assistance, and establishment of appeal mechanisms.

Under the new arrangements all Commonwealth and State grant funds are paid into the Rental Capital Account. Funds in the Rental Capital Account are to be mainly directed to the provision of additional dwellings although a limited proportion (up to 25 per cent) may be used for non-capital purposes, such as leasing.

Eligibility for rental housing will continue to be determined by the States, with priority given to those in most need. States are required to fix rents having regard primarily to the costs of providing that housing and to the capacity of tenants to pay. Rents charged are to be not less than cost rents or market rents.

The new home purchase assistance provisions are directed towards ensuring that scarce CSHA funds are used in the most effective and efficient manner to help low and moderate income earners achieve home ownership. Only very limited new CSHA funds can now be used to gear revolving funds in their home purchase assistance accounts with private sector funds to increase the volume of funds available for lending.

Under the Agreement, home purchase loans are to be related to market conditions and repayments linked to income. In addition, States are required to tailor loans to ensure that they are accessible to existing tenants and that, where appropriate, shared ownership and rental purchase schemes are offered to maximise the choice of assistance.

Subsidy assistance is to be restricted to those who require it and for the period of their need and recovered except in cases of individual hardship. While the States remain responsible for determining detailed eligibility conditions, the Commonwealth is required to formally approve those schemes which the States intend to be counted for matching purposes.

COMMONWEALTH-STATE HOUSING AGREEMENT: OUTCOMES FOR 1988-89

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*Total*
Rental Housing Assistance—								
Commenced	2,619	2,941	2,818	1,453	1,174	344	209	11,558
Completed	2,945	1,751	1,775	1,405	847	416	346	9,485
Purchased	845	620	390	528	490	132	7	3,012
Reductions								
sold	1,553	110	43	1,012	343	583	36	3,680
destroyed	59	50	7	—	103	8	5	232
Total stock at 30 June	**113,339**	**59,285**	**34,073**	**62,339**	**33,189**	**13,292**	**10,464**	**325,981**
Households accommodated	11,009	8,881	6,355	9,019	6,773	2,125	3,003	47,165
Home Purchase Assistance								
Loans approved for—								
Construction	726	1,318	1,375	458	707	34	1	4,619
Purchase	3,334	288	3,527	1,701	—	859	96	9,805
Not specified	5,259	2,496	—	351	1093	—	273	9,472
Total	**9,319**	**4,102**	**4,902**	**2,510**	**1,800**	**893**	**370**	**23,896**

COMMONWEALTH-STATE HOUSING AGREEMENT: DISTRIBUTION OF 1990-91 FEDERAL FUNDS 1989-90 FIGURES IN BRACKETS(a)(b)
($ million)

State	*Untied*		*Rental Assistance for Pensioners*		*Rental Assistance for Aboriginals*		*Mortgage and Rent Relief*	
New South Wales	252.918	(244.8735)	18.520	(18.520)	17.777	(17.777)	10.599	(10.646)
Victoria	193.991	(190.7760)	10.882	(10.882)	3.638	(3.638)	7.938	(7.961)
Queensland	108.368	(92.5915)	9.644	(9.644)	25.227	(25.227)	5.206	(5.142)
South Australia	74.715	(82.0595)	3.849	(3.849)	8.342	(8.342)	2.618	(2.630)
Western Australia	69.202	(66.2660)	4.153	(4.153)	15.862	(15.862)	2.927	(2.898)
Tasmania	37.383	(44.9825)	1.179	(1.179)	0.696	(0.696)	0.829	(0.836)
Northern Territory	40.673	(55.7010)	0.523	(0.523)	19.458	(19.458)	0.287	(0.291)
Australian Capital Territory	15.681	(15.6810)	0.523	(0.523)	0.000	0.000	0.510	(0.510)
Total	**792.931**	**(792.9310)**	**49.273**	**(49.273)**	**91.000**	**(91.000)**	**30.914**	**(30.914)**

State	*Crisis Accommodation Program*		*Local Government and Community Housing Program*		*Total*	
New South Wales	13.595	(13.656)	8.366	(8.404)	321.775	(313.8765)
Victoria	10.182	(10.212)	6.266	(6.284)	232.897	229.7530)
Queensland	6.678	(6.598)	4.109	(4.060)	159.23	(143.2635)
South Australia	3.358	(3.372)	2.067	(2.075)	94.949	(102.3265)
Western Australia	3,754	(3.717)	2.310	(2.288)	98.208	(95.1840)
Tasmania	1.064	(1.072)	0.655	(0.660)	41.806	(49.4255)
Northern Territory	0.369	(0.373)	0.227	(0.229)	61.537	(76.5750)
Australian Capital Territory	0.655	(0.655)	0.403	(0.403)	17.772	(17.7720)
Total	**39.655**	**(39.655)**	**24.403**	**(24.403)**	**1,028.176**	**(1,028.1760)**

(a) For comparison purposes, the 1989-90 figures do not included one off programs to the States of $15 million for Mortgage relief and $10 million for Crisis Accommodation Burdekin initiatives. *(b)* The allocation to States vary slightly from the indicative figures provided to the states during CSHA re-negotiations because of population changes.
NOTE: The Mortgage and Rent Relief Scheme allocations for 1990-91 shown represent the full funds for the year although only $10.819 million will be available initially.

Specific purpose programs

In addition to untied assistance used for the provision of home purchase assistance and general public rental housing, the CSHA provides funds for a number of specific purpose programs:

(a) *Rental Assistance for Pensioners*—provides rental housing assistance to pensioners and beneficiaries including age or invalid pensioners, widows and supporting parents.

(b) *Rental Assistance for Aboriginals*—since 1979–80 the Commonwealth Government has provided separately identified funding to the States for rental housing assistance for Aboriginals through the CSHA. Between 1980 and 30 June 1989, 6,751 new dwellings have been provided in the six States and the Northern Territory under this program. This includes the upgrading of existing dwellings.

(c) *Mortgage and Rent Relief Scheme*—provides assistance to households experiencing severe short term hardship in meeting private mortgage or rental payments. Rental assistance can also be used for bond money, relocation costs and housing advisory services.

(d) *Crisis Accommodation Program* (CAP)—provides capital funds for accommodation for people who are homeless and in crisis. It operates in close conjunction with the Supported Accommodation Assistance Program (SAAP) which provides recurrent funding to approved organisations providing transitional supported accommodation services and related support services to people who are homeless and in crisis.

(e) *Local Government and Community Housing Program*—provides assistance to achieve the following objectives:

- encourage local government bodies and community groups to provide rental housing;
- facilitate greater tenant management of rental housing;
- respond to specific housing needs previously overlooked;
- attract local government and non-government funds and other resources into the program; and
- involve local government and community groups in the identification of housing needs and the formulation of local housing policies.

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.

From November 1965, when the Corporation commenced operations, until the end of June 1990, 934,000 loans to the value of $32,129 million had been insured.

Commonwealth–State Housing Agreement (Service Personnel)—CSHA(SP)

The disposal of surplus service personnel dwellings is the responsibility of the Minister for Defence Science and Personnel. The Minister announced on 11 May 1989 that the Commonwealth would re-negotiate the CSHA(SP) with the States. New legislation is expected to be passed by Parliament late in 1990.

These new arrangements will enable a large number of ex CSHA(SP) houses to be transferred to public housing stock administered by State housing authorities.

Defence Service Homes (DSH) Scheme

The DSH Scheme provides financial compensation to recognise men and women who have served in the country's defence forces, particularly those who may have been disadvantaged through their service in achieving home ownership. People who have served overseas in wartime, and those who have completed qualifying periods of peacetime service, are eligible.

There are two housing related benefits:

- a subsidy on first mortgage housing related loans made by Westpac, up to a maximum of $25,000. The subsidy is equal to the difference between the market interest rate and the DSH fixed concessional rate of 6.85 per cent. There are some ancillary benefits to people with DSH loans, such as assistance with essential home repairs and assistance to widows, which are needs-based; and
- a cooperative insurance scheme open to DSH borrowers, providing low cost building cover (not contents).

DSH SUBSIDY 1989–90

Applications received	No.	9,922
Interest subsidy by Commonwealth	$m	165.3
Number of loan accounts	No.	129,580
Loans granted by Westpac	$m	9,123
Loan expenditure by Westpac	$m	186.5
Principal outstanding to Westpac	$m	1,487.5

DSH INSURANCE 1989–90

Gross Premium Income	$m	14.7
Total sum insured	$m	16,199
Average sum insured	$	93,289
Number of homes insured	No.	173,639
Claims incurred	No.	27,332
Claims incurred	$m	13,493

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.

New South Wales—Department of Housing

The Housing Act 1985 established both the Department of Housing and an associated statutory authority, the New South Wales Land and Housing Corporation. The Department's stated purpose is to 'maximise housing opportunities for the people of NSW' and it has consequently adopted the following goals:

- to increase home ownership in NSW;
- to increase land availability;
- to provide appropriate public housing to those who are unable to satisfy their need in the private sector;
- to support and encourage the private rental sector; and
- to improve the efficiency and effectiveness of housing administration.

The operations of four major functional areas achieve these goals.

Land, Housing and Marketing Services

Main activities: provision of home loans through 'Homefund Low Start Affordable Loans' and 'Homefund Low Start Loans' (which replace all previous loan programs); the Mortgage Assistance Scheme; home purchase programs for Department tenants and applicants; 'land' and 'land and house' sales (retailed through Landcom) and manage the Department's home purchase policy.

Financial and Management Services
Main activities: provision of support to management and the organisation as a whole in the fields of corporate services; finance; computer and legal services; research and information and management audits.

Production Services
Main activities: provision of sufficient land and housing to supply public rental and community housing programs and Landcom marketing needs; purchase existing dwellings to meet special needs and design, construction and renovation of buildings.

Housing Services
Main activities: (in Public Rental Housing) allocate housing on a 'wait-turn' basis; provide rental rebates; maintain and improve dwellings; provide accommodation under various 'Community Housing Programs'; provide tenant and community support; provide neighbourhood facilities and home and community care. (NOTE: funds for public rental and community housing are provided under the terms of the Commonwealth–State Housing Agreement; general housing funds are matched by the NSW Government on a dollar for dollar basis while other funds are grants in full by the Commonwealth for specific purpose programs.)

Main activities: (in Private Rental Services) assist households in financial difficulty through the Rental Assistance Scheme; encourage private investment through the Rental Property Trust; undertake research into rental conditions; provide referral services and administer the Fair Rents and Strata Titles Board and the Residential Tenancies Tribunal.

DEPARTMENT OF HOUSING OPERATIONS 1988–89

Public housing stock (at 30 June 1989)	113,339	(+2.5%)
Dwellings purchased or completed during 1988–89	3,790	(–5.7%)
Number of households assisted—		
receiving home loans from Homefund	9,319	(+93.3%)
receiving mortgage assistance	476	(–12.0%)
sold land by Landcom (including land and house packages and land wholesaling)	6,009	(+59.9%)
allocated public rental accommodation	11,009	(+1.9%)
by community programs to find public rental accommodation	2,458	(+0.1%)
receiving rental assistance for private accommodation	20,011	(–6.3%)
allocated private rental accommodation acquired through the Rental Property Trust	593	(+69.4%)

Victoria—Ministry of Housing and Construction

The Ministry of Housing and Construction provides a range of housing programs for Victorians and a building design and construction service for the Victorian Government.

The Ministry's key objectives in relation to housing are:

- to facilitate the continuing access of all Victorians to affordable, adequate and appropriate housing; and
- to deliver housing assistance programs in an effective, efficient and equitable manner.

This involves not only the provision of public rental accommodation, but assistance to private tenants and potential home owners. Public rental accommodation is funded from a combination of Commonwealth–State Housing Agreement, State and Ministry funds. During 1989–90, the Ministry acquired over 2,450 units, taking Victoria's public rental stock to approximately 62,000 units. About 65 per cent of the Ministry's rental stock is located in the metropolitan area.

Over 46,500 tenants or 75 per cent of public housing clients are on reduced rents (rebates). The Ministry also assists tenants in the private rental market through the Bond and Relocation Scheme which provides funds to individuals and households for security deposits (bonds) and removal expenses. During the 1989–90 financial year, 7,957 households received assistance under this scheme averaging $416 per household. In addition, the Ministry cooperates with community groups to provide emergency housing and programs to assist the homeless.

Since merging with the former Public Works Department in 1988–89 the Ministry is responsible for the design and construction of many public building projects. The key objectives in this area are:

- to provide policy advice and architectural, engineering, design and supervision services to agencies in relation to their building programs; and
- to maintain a direct construction capability and provide construction policy advice to Government.

The Ministry is involved in a diverse range of construction projects including the provision of schools, TAFE colleges, police stations and court houses as well as many special projects such as the Monash Medical Centre. Architectural, engineering, design, consultancy or supervision services are usually provided for these different projects. Advice on building matters is given to Government after consultation with the relevant professional associations and national bodies. The Ministry advises Government on the level of adherence to approved construction policies, building and construction standards and practices, and on guidelines for project delivery by client agencies.

Queensland—Department of Housing and Local Government

Housing assistance in Queensland is provided by the Department of Housing and Local Government.

The Queensland Department of Housing and Local Government was formed in December 1989 by merging the Queensland Housing Commission and the Local Government Department.

The Department assists people in need to achieve adequate and secure housing at a price they can afford to pay. This is done by providing public rental housing, home ownership assistance and other forms of specific purpose housing assistance.

Public rental housing consists of attached and detached houses, apartments, duplexes, cluster housing, and pensioner units, built to a standard comparable with the private sector. All people 18 and over resident in Queensland are eligible to apply for public housing. Housing is provided to applicants on a wait-turn basis with the rent being based on the household income.

During 1989–90, the Department increased its public housing stock, through construction and purchase, by 3,364 dwellings. This brings to 38,844 the total number of rental dwellings available which includes 32,770 dwellings available for public housing. The remaining dwellings are employer tenancy, and defence dwellings constructed by the Department.

The Department operates loan schemes for low to moderate income earners to purchase existing housing or construct new housing on suitable building sites. In 1989–90, there were 9,384 loans advanced for this purchase making a total of 72,739 since the inception of the Commonwealth–State Housing Agreements in 1944–45. The Department also has power to make advances, secured by mortgage, to firms for housing employees. The Department is able to sell houses under contract of sale conditions; 31 such sales were completed in 1989–90.

In all, the Department was responsible for assisting 12,748 households of low to moderate incomes through construction and purchase for public housing and by providing home loans.

Other assistance provided by the Department includes:

- funding for people to buy houses and form housing cooperatives;
- headleasing of housing to local community organisations who manage tenancies on behalf of the Department;
- rent assistance for families in the private rental market;
- bond assistance for people establishing tenancies in the private rental market;
- *short term mortgage relief to home purchasers experiencing financial hardship;*
- re-financing existing mortgages of mortgagors where appropriate; and
- financial relief for home purchasers facing increased repayments resulting from high interest costs.

South Australia—South Australian Housing Trust

The primary role of the Trust is to provide housing for those in need, and within their capacity to pay, and to do so in ways which contribute as far as possible to the social well-being and economic development of the State. 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 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, Interest Rate Protection Scheme and the Homesure Mortgage Assistance 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.

A total of approximately 113,863 dwellings have been built, purchased or leased by the Trust since 1936.

Western Australia—State Housing Commission of Western Australia

The State Housing Commission, trading as Homeswest, constructs a variety of dwelling types for its rental and purchase programs. In addition, it constructs housing for other government departments and constructs and maintains houses for the Government Employees' Housing Authority, the Aboriginal Housing Board and community groups.

Homeswest is a major land developer in Western Australia and has the role of providing reasonably priced land to the first home buyer. As part of its development role, Homeswest is promoting better use of land, e.g. through flexible lot sizes and consolidation of underutilised urban sites. It also enters into joint ventures with the private sector in land development, finance and housing construction.

At 30 June 1990, the Commission had provided under all schemes since 30 June 1944, a total of 83,874 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 1990, 1,968 units of accommodation were provided.

Building societies are a major source of housing finance in Western Australia. At 30 June 1990, it was estimated that the assets of permanent and terminating societies were about $2.2 billion. Currently there are five permanent building societies (three active and two inactive) and 89 terminating building societies operating.

Tasmania—Department of Community Services

Housing and Family Services 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.

There were 291 dwellings completed during 1989–90. The total number of dwellings constructed to 30 June 1990 was 25,044 of which 9,603 have either been sold or demolished.

There were 1,779 properties purchased, making a total dwelling stock of 17,020. Of these, 13,900 are detached or semi-detached, 2,665 are elderly persons' units, 424 are multi-unit flats, and 31 are movable units.

Dwellings are allotted on a rental or purchase basis. Rental is now assessed at a proportion of household income. Tenants are able to buy their home if they wish.

Housing Schemes in Australian Territories

Northern Territory

The Northern Territory Housing Commission was established in 1959 and currently operates under authority of the *Housing Act 1982*. For administration purposes only, the Commission was amalgamated with other bodies to form the Department of Lands and Housing on 19 March 1987. However, the Commission still retains its autonomy under a single Commissioner.

Australian Capital Territory

The ACT Housing Trust provides a range of public rental housing types to residents of the Australian Capital Territory on low and moderate incomes. Continued expansions of the public rental stock during 1989–90 resulted in a total rental stock of 12,141 dwellings at 30 June 1990.

In addition to the above, the Housing Trust provides home purchase assistance to low and moderate income earners through the Commissioner for Housing Loans Scheme. During 1989–90, $13.6 million was made available through loans bringing the total number of mortgages administered by the Trust to 6,363, with another 4,667 being managed on behalf of the Commonwealth of Australia.

Rental and home purchase assistance are both provided on a means tested basis. Since 1987 the Trust's policies and programs have been aligned with the principles of the Commonwealth–State Housing Agreement.

Summary of rental activities of government authorities

GOVERNMENT HOUSING AUTHORITIES: REVENUE FROM RENTALS
($'000)

Year	*NSW*	*Vic.(a)*	*Qld*	*SA*	*WA(b)*	*Tas.*	*NT(b)*	*ACT*	*Aust.*
1987–88	298,648	135,744	r87,653	140,219	r66,010	49,629	33,068	31,475	r842,446
1988–89	331,292	142,170	r97,874	161,910	71,217	44,536	33,779	34,582	r917,360
1989–90	398,000	153,330	108,970	168,766	75,619	40,373	35,302	37,579	1,017,939

(a) Prior to 1983–84 figures relate to Housing Commission, prior to 1988–89 figures relate to Ministry of Housing and thereafter the Ministry of Housing and Construction. *(b)* Figures relate to Housing Commission only.

GOVERNMENT HOUSING AUTHORITIES: NUMBER OF TENANTS PAYING RENT

Year	*NSW*	*Vic.(a)*	*Qld*	*SA(b)*	*WA(c)*	*Tas.(d)*	*NT(d)*	*ACT(d)*	*Aust.*
1987–88	109,958	60,300	r33,327	60,655	31,433	13,305	r9,316	11,326	r329,620
1988–89	112,518	58,846	35,525	62,339	r32,017	13,292	9,400	11,380	335,317
1989–90	116,082	59,068	38,844	63,818	33,273	13,394	9,529	11,423	345,431

(a) Prior to 1983–84 figures relate to Housing Commission, prior to 1988–89 figures relate to Ministry of Housing and thereafter the Ministry of Housing and Construction. *(b)* Figures relate to dwelling stock, not tenants. *(c)* Figures relate to Housing Commission only. *(d)* 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 Government or State Governments. The information in this section concerns the direct loans made to home purchasers. Loans to institutions which in turn lend money 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.

State and Territory authorities and agencies

New South Wales—Department of Housing

All of the Department's home lending programs now operate under a scheme launched in 1989 called 'Homefund', which provides for two types of loans.

Homefund Low Start Loans

These loans, previously known as Premier Low Start Loans, are targeted at moderate income earners who cannot obtain sufficient funds from conventional lenders to buy a home. The interest rate is fixed and repayments commence between 27 per cent and 30 per cent of income, increasing by six per cent until the loan is paid off. During 1988–89, $292 million was advanced under this program and the average income of eligible applicants was $32,000.

Homefund Low Start Affordable Loans

These are subsidised loans available to low to moderate income earners. Repayments are income-geared and interest subsidies are provided if repayments are not sufficient to cover the interest on the loan. The amount which can be borrowed depends on income and loans of up to 95 per cent of property value are available. During 1988–89, $216.7 million was lent under this program and the average income of borrowers was $20,000.

The Department is also running some programs aimed at expanding home purchase opportunities for its tenants. Homefund Low Start Affordable Loans are provided to purchase their current rental properties or a home on the private market. Another program, the State Partnership Scheme, allows tenants or public housing applicants to purchase up to a 50 per cent share in a home with a Homefund loan.

Victoria—Ministry of Housing and Construction

The Ministry of Housing and Construction approved a total of 3,665 home purchase loans during 1989–90. These were provided through a range of different schemes: Home Opportunity Loans Scheme (HOLS)—2,984 loans; HOLS Priority Loans—300 loans; Shared Home Ownership (SHO)—217 loans; SHO Priority—40 loans; Capital Indexed Loans—105 loans; and Indexed Repayment Loans—19 loans.

The Home Opportunity Loans Scheme is the Ministry's major lending program. This scheme is designed to help more Victorians achieve home ownership by utilising a fully indexed mortgage instrument based on a real rate of interest (currently 3.9 per cent or 6.9 per cent depending on the applicant's income). Repayments are geared to 25–27 per cent of the applicant's income. This scheme replaces the Capital Indexed Loans scheme which was the main lending program from 1986 to 1988–89.

The Ministry also provides a shared home ownership scheme designed to facilitate entry into home ownership for households unable to afford other government or private sector schemes. Under SHO clients purchase a share of a property through a HOLS loan and pay rent to the Ministry who purchases the remaining share of the property. Payments to the Ministry consist of loan payments and rent payments on the Ministry share, totalling 25 per cent of eligible income, adjusted annually by changes in the Consumer Price Index.

The Indexed Repayment Loans scheme is a joint venture between the ministry and three leading banks. It was first launched in 1986 and is currently being wound down.

Queensland—Department of Housing and Local Government

The Department operated three loan schemes to assist non-home owners to purchase or construct a dwelling they intended to reside in. These schemes operated throughout 1989–90 but will be replaced during 1990–91 with the Home Ownership Made Easier products. The three schemes were:

Interest Subsidy Scheme

This Scheme assists low income earners by subsidising interest charges and providing an affordable monthly payment at 25 per cent of gross income, adjusted whenever income changes. Most borrowers under this Scheme would not have the capacity to obtain finance from other lenders. The scheme is subject to a means test.

Second Loan Scheme

This scheme may be available to borrowers eligible for an Interest Subsidy Loan and who are also eligible for the Commonwealth First Home Owners Scheme. This loan assists to bridge the deposit gap, and utilises the First Home Owners Scheme (FHOS) subsidy payout.

Flexible Term Loan

This loan is intended as an alternative source of finance for borrowers not eligible for the Interest Subsidy Scheme or for those with sufficient income or savings to not need the protection of an Interest Subsidy Loan. 'Slow' and 'Quick' start options are offered with several term options also available. The scheme is subject to a maximum joint income limit.

South Australia—South Australia Housing Trust

Until August 1989, the Trust administered the Rental Purchase Scheme in conjunction with the State Bank. In 1989–90, a total of 97 Rental Purchase sales took place. In September 1989, the State Government's *Homestart* scheme superseded the Rental Purchase scheme.

In September 1986, the Trust initiated the Home Trust Shared Ownership Scheme, now called the Progressive Purchase Plan whereby tenants can purchase their home in affordable stages commencing with a 25 per cent share. During 1989–90, 147 sales were made under the scheme.

Western Australia—State Housing Commission of Western Australia

The Commission administers four schemes to assist applicants achieve home ownership. These schemes are known as First Mortgage, Flexible Deposit, Shared Equity and Senior Citizens Loan Schemes. The maximum interest rate is maintained in relationship with the pre-April 1986 Commonwealth Bank interest mortgage rate 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 assessed family income in repayments. The maximum repayment period is 30 years.

Under the schemes, the applicants are able to select an established home or build a new home of their choice. The maximum income limits vary with the location. A family with one child can have a maximum weekly income of $467.00 in the metropolitan area, $604.00 in remote areas and $659.00 in the Kimberley region. These limits increase by $24 for each additional child after the first, and $35 for each additional child beyond the third.

Under the First Mortgage, Flexi Deposit and Shared Equity Schemes, the maximum value of house and land in the metropolitan area is $84,000 if buying an established home or if building a new home. In non-metropolitan areas, the maximum value varies from $66,000 in country areas to $103,500 in the Kimberley region and $130,000 in Broome. Minimum deposit required is usually five per cent of valuation, although with the Flexi Deposit Scheme as little as $500 can be paid as the deposit on a home.

The Shared Equity Scheme was designed to help people on very low incomes into home ownership. Homeswest purchases the home on behalf of the applicant and funds the applicant to an equity share of not less than 60 per cent of the home value. Normally five per cent of the loan sought is required for the deposit but this can be reduced to as little as $500. All maintenance, insurance and rates are shared in accordance with the applicants' equity share.

Assistance through Terminating Building Societies is available to eligible applicants from the Loans Priority List under first mortgage conditions. Funds are not available for second mortgages. The interest rate on advances is 13.5 per cent and the maximum term is for 30 years. In the metropolitan area, the maximum income limit is $467.00 per week plus an extra $24 per week for each dependent child, and $35 for each additional child beyond the third. The value of house and land cannot exceed $84,000 and a 5 to 10 per cent deposit is required. In other areas around the State, maximum income limits vary between $467.00 in country areas and $659.00 in the Kimberley region and the maximum value of house and land varies from $66,000 in country areas to $103,500 in the Kimberley region to $130,000 in Broome.

Tasmania—Tasmanian Development Authority

The Authority is responsible for the administration of funds made under the Home Purchase Assistance section of the *Housing Assistance Act 1984*. The State has also provided State loan funds for lending under the Homes Act.

The primary principle of the Housing Assistance Act is to ensure that every person in Australia has access to adequate and appropriate housing at a price within his or her capacity to pay.

The Authority has a Deferred Interest Subsidy Scheme, whereby low income earners can borrow sufficient amounts to enable them to purchase a reasonable dwelling. The current rate of interest is 13.5 per cent with monthly repayments based on 25 per cent of joint gross monthly income. When the repayment is not sufficient to meet the interest charged on the loan, the balance is deferred and repaid in the later years of the loan. There is no interest charged on the deferred proportion of the loan.

The Authority has a Home Ownership Building Industry Scheme (HOBIS) whereby private builders are requested to tender for the construction of homes throughout the State for low to moderate income earners who could not otherwise afford to purchase a new home.

Total lending to both builders and first home buyers exceeds $69 million since the introduction of HOBIS in 1987 and more than 600 brick veneer homes have been built and sold.

TASMANIAN DEVELOPMENT AUTHORITY, ADVANCES FOR HOUSING(a)

Particulars	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*	*1989–90*
Advances approved—						
Number	537	815	624	704	712	714
Value ($'000)	17,437	28,390	24,790	29,423	33,237	33,995
Advances outstanding at 30 June ($'000)	90,338	106,000	114,606	126,263	154,231	172,443

(a) Excludes advances to cooperative housing societies.

Northern Territory—Interest Subsidy Scheme

The Northern Territory Interest Subsidy Scheme was introduced on 1 December 1988. The previous loan scheme, the Northern Territory Home Purchase Assistance Scheme closed to new applications on that date.

The Subsidy Scheme provides a non-recoverable subsidy on a private sector loan to people in the $300 to $600 gross weekly earnings bracket.

There are eight levels of subsidy at which participants, depending on income, will commence under the scheme. The initial subsidy will be maintained for three years, at which time it will decrease to the next level, and annually thereafter.

The maximum subsidy is based on a $55,000 loan and will be reduced proportionately on loans of lesser amounts. Eligibility criteria for the scheme are as follows:

- value of house–land package to be $100,000 or less;
- applicants purchasing their first home in the Northern Territory who do not own another dwelling elsewhere in Australia; and
- intend to reside in the dwelling.

Northern Territory—Home Establishment Grant

The Home Establishment Grant of $1,000 is available to persons buying or building their first home in the Northern Territory. The value of house and land must not exceed $100,000. The purpose of the grant is to assist home buyers defray those expenses incurred in purchasing their homes, for example loan establishment costs, legal fees, stamp duty and so on.

Northern Territory—Sales Scheme

A scheme exists to allow eligible tenants of the Northern Territory Housing Commission to purchase dwellings under the General Public Sales Scheme. Sales are on a cash basis only to approved tenants.

Australian Capital Territory

The Commissioner for Housing operates an income-geared loan scheme to assist people who are generally unable to afford finance in the private market. Loans to a maximum of $70,000 over a maximum term of 30 years are available to purchase or erect 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:

- be a permanent resident of Australia and have lived or worked in the Australian Capital Territory for at least six months prior to loan approval;
- not have any interest whatsoever in real property located in the Australian Capital Territory or Queanbeyan other than the dwelling or the land upon which it is proposed to erect the dwelling; and
- not previously have received government financial assistance in the form of a loan for the purchase or construction of a dwelling in the Australian Capital Territory or Queanbeyan.

Interest rates vary but must not exceed the Commonwealth Savings Bank new home loans rate. The interest rate for new loans at 30 June 1989 was 13.5 per cent. Instalment repayments are geared to the applicant committing 25 per cent of income to total mortgage payments and instalment subsidies are repaid over the term of the loan or upon discharge. At 30 June 1989, 6,818 properties were under mortgage to the Commissioner for Housing. The Commissioner also administers 5,028 Commonwealth of Australia mortgages.

Housing finance for owner occupation

The following tables present statistics of secured housing finance commitments made by significant lenders to individuals for the construction or purchase of dwellings for owner occupation. For more comprehensive statistics and detailed information on the scope and coverage of these statistics refer to the monthly publication *Housing Finance for Owner Occupation, Australia* (5609.0).

HOUSING FINANCE FOR OWNER OCCUPATION
($million)

	Finance commitments for—				
	Construction or purchase dwellings	*Alterations and additions*	*Cancellations of commitments*	*Commitments advanced*	*Commitments not advanced*
1987-88	20,109.6	707.3	617.6	18,059.6	4,597.9
1988-89	22,787.8	998.4	851.3	23,533.1	3,865.6
1989-90	18,689.5	904.7	751.3	19,102.7	3,499.9

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*
CONSTRUCTION OF DWELLINGS				
			—number—	
1987-88	52,425	8,823	4,380	65,628
1988-89	63,567	7,264	4,589	75,420
1989-90	52,091	3,576	5,252	60,919
			—$million—	
1987-88	2,556.7	482.9	179.7	3,219.3
1988-89	3,335.1	443.4	246.8	4,025.3
1989-90	2,862.0	245.2	311.2	3,418.4
PURCHASE OF NEWLY ERECTED DWELLINGS				
			—number—	
1987-88	14,346	3,056	1,778	19,180
1988-89	14,213	1,941	3,195	19,349
1989-90	8,148	1,309	4,861	14,318
			—$million—	
1987-88	801.1	181.5	75.6	1,058.2
1988-89	922.3	134.9	180.2	1,237.4
1989-90	589.8	108.0	387.5	1,085.3
PURCHASE OF ESTABLISHED DWELLINGS				
			—number—	
1987-88	219,789	51,630	15,511	286,930
1988-89	204,559	36,619	23,721	264,899
1989-90	150,276	21,179	29,536	200,991
			—$million—	
1987-88	12,246.4	2,876.5	709.2	15,832.1
1988-89	13,730.5	2,346.1	1,448.4	17,525.0
1989-90	10,607.2	1,525.7	2,052.7	14,185.6
TOTAL				
			—number—	
1987-88	286,560	63,509	21,669	371,738
1988-89	282,339	45,824	31,505	359,668
1989-90	210,515	26,064	39,649	276,228
			—$million—	
1987-88	15,604.2	3,540.9	964.5	20,109.6
1988-89	17,987.9	2,924.4	1,875.5	22,787.8
1989-90	14,059.1	1,878.9	2,751.4	18,689.4

(a) Includes cooperative housing societies, finance companies, governments, credit cooperatives and insurance companies.

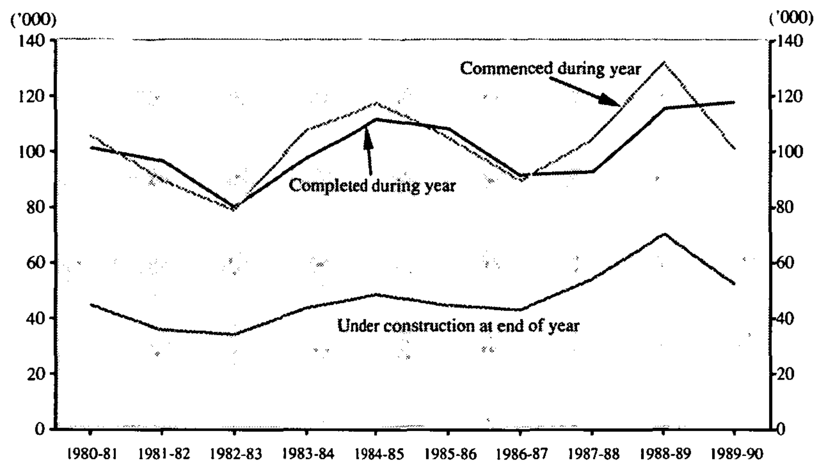
CONSTRUCTION

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.

Number of new houses

NUMBER OF NEW HOUSES, AUSTRALIA



Note: Break in series from 1980-81 and 1981-82. (See explanation on pages 715-16 in Year Book No.71)

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 1989–90.

NUMBER OF NEW HOUSES, 1989–90
('000)

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Private Sector—									
Approved	25.1	26.3	22.4	7.2	11.3	2.5	0.5	1.2	96.6
Commenced p	25.7	26.5	22.4	6.7	10.8	2.4	0.5	1.4	96.4
Under construction*(a)* p	17.8	15.3	6.3	2.9	5.0	2.0	0.3	0.7	50.3
Completed p	28.4	30.7	25.5	6.9	17.0	2.5	0.5	1.5	113.0
Public Sector—									
Approved	0.4	1.3	1.2	0.4	0.5	0.1	0.1	0.1	4.1
Commenced p	0.6	1.1	1.3	0.4	0.5	0.1	0.1	0.1	4.3
Under construction*(a)* p	0.3	0.6	0.3	0.3	0.2	—	0.1	0.1	1.8
Completed p	0.7	1.0	1.5	0.5	0.7	0.2	0.1	0.1	4.7
Total—									
Approved	25.5	27.6	23.6	7.7	11.8	2.7	0.6	1.3	100.8
Commenced p	26.3	27.6	23.8	7.2	11.3	2.6	0.6	1.5	100.7
Under construction*(a)* p	18.1	15.9	6.6	3.2	5.2	2.0	0.4	0.8	52.1
Completed p	29.1	31.7	27.1	7.4	17.7	2.6	0.6	1.6	117.7

(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 1989–90 classified according to the material of their outer walls.

NUMBER OF NEW HOUSES APPROVED BY MATERIAL OF OUTER WALLS AS A PROPORTION OF TOTAL STATE, 1989–90
(per cent)

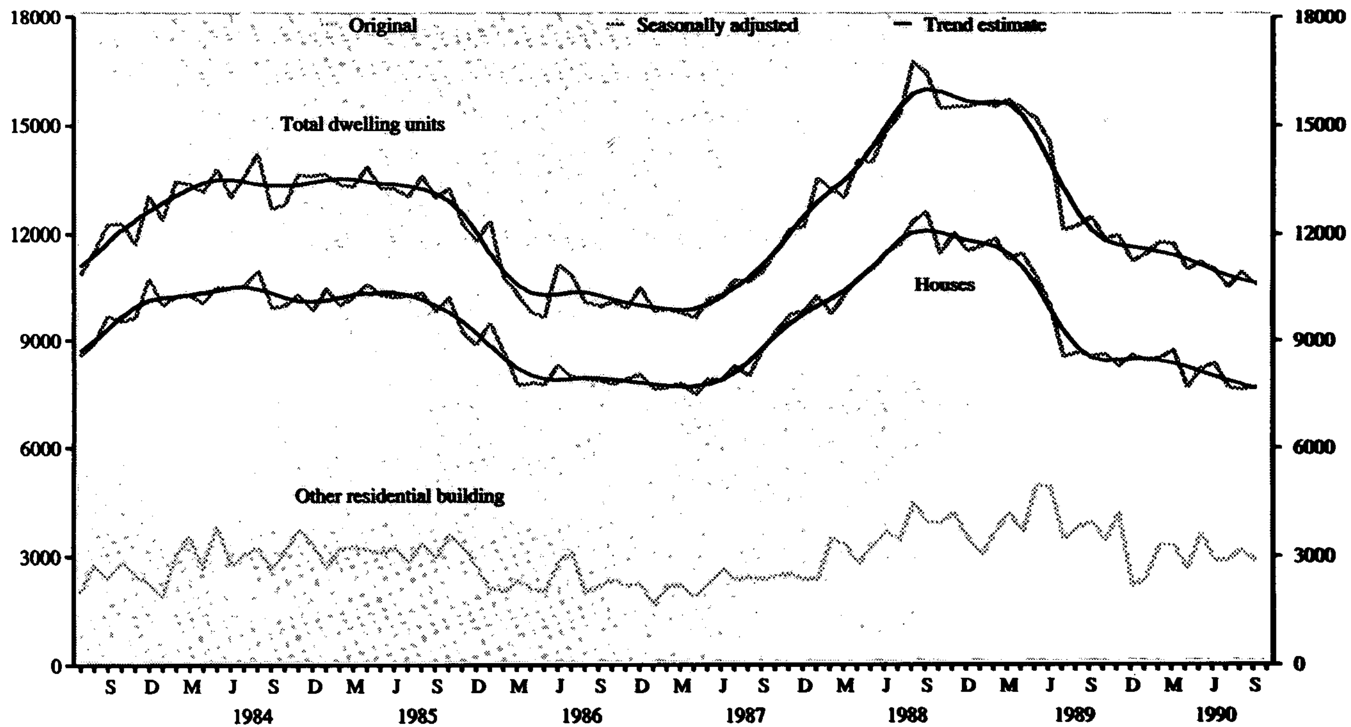
Material of outer wall	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Double brick*(a)*	14.9	1.4	7.0	4.4	81.3	5.2	64.8	1.1	16.2
Brick veneer	69.5	63.3	75.3	73.2	5.6	73.0	11.7	91.8	62.0
Timber	6.9	6.7	8.7	1.1	3.7	14.4	2.1	0.2	6.5
Fibre cement	7.3	1.9	6.9	6.1	7.2	3.1	1.1	—	5.4
Other	1.3	1.2	2.1	0.2	2.2	4.2	19.8	0.9	1.7
Not stated	—	25.5	—	15.0	—	—	0.5	6.0	8.2

(a) Includes houses constructed with outer walls of stone or concrete.

Number of dwelling units in new other residential building

The level of other residential building construction is highly variable and does not follow the 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.

NUMBER OF DWELLING UNITS APPROVED IN NEW RESIDENTIAL BUILDINGS
AUSTRALIA



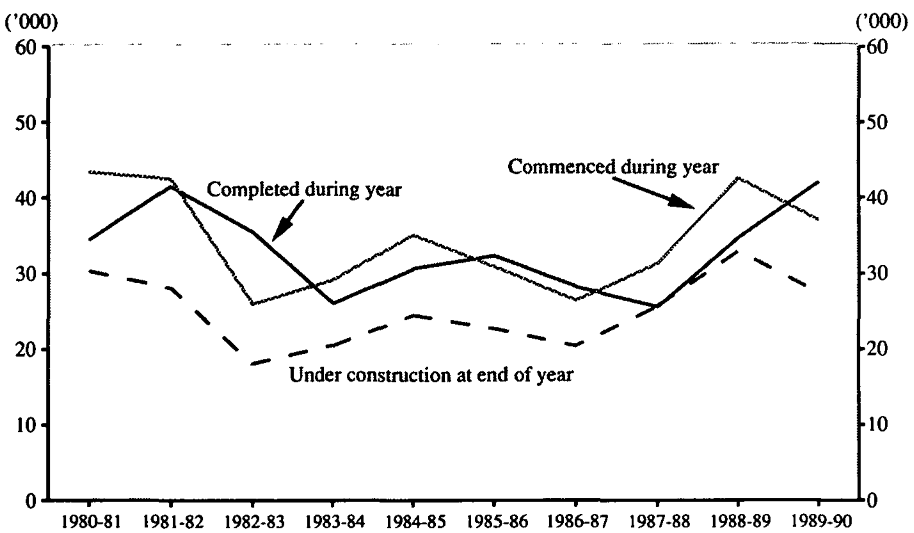
The following table shows the number of new dwelling units in other residential building approved, commenced, under construction and completed by type of ownership in each State and Territory for the year 1989–90.

NUMBER OF DWELLING UNITS IN NEW OTHER RESIDENTIAL BUILDING 1989—90
('000)

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Private Sector—									
Approved	12.5	1.9	8.8	2.9	4.5	0.8	0.2	1.0	32.4
Commenced p	11.1	1.8	7.9	2.7	4.6	0.7	0.2	0.9	29.9
Under construction*(a)* p	10.2	1.8	4.9	1.5	2.3	0.5	0.1	0.7	21.9
Completed p	11.7	2.1	10.3	2.3	6.3	0.7	0.2	0.7	34.3
Public Sector—									
Approved	2.2	0.6	1.8	1.1	0.9	0.1	0.1	0.1	6.8
Commenced p	2.3	0.6	1.8	1.1	1.0	0.1	0.1	—	7.1
Under construction*(a)* p	2.4	0.6	0.9	0.7	0.6	—	0.1	—	5.3
Completed p	2.9	0.6	2.0	0.9	0.9	0.2	0.1	0.1	7.8
Total —									
Approved	14.7	2.5	10.5	4.0	5.4	0.9	0.3	1.1	39.2
Commenced p	13.5	2.4	9.7	3.8	5.6	0.8	0.3	0.9	37.0
Under construction*(a)* p	12.6	2.4	5.8	2.2	2.8	0.5	0.2	0.7	27.3
Completed p	14.6	2.6	12.4	3.2	7.2	0.9	0.4	0.8	42.1

(a) At end of period.

NUMBER OF DWELLING UNITS IN NEW OTHER RESIDENTIAL BUILDINGS, AUSTRALIA



Note: Break in series from 1980-81 and 1981-82. (See explanation on pages 715-16 in Year Book No.71)

Value of buildings

The table below shows the value of all buildings approved, commenced, under construction, completed, work done and work yet to be done in Australia for the year 1989–90, according to the class of buildings. The classification of non-residential 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, AUSTRALIA 1989–90
($ million)

Class of building	*Approved*	*Commenced* p	*Under construction(a)* p	*Completed* p	*Work done (b)* p	*Work yet to be done (a)* p
New residential buildings—						
New houses	8,435.9	8,650.8	5,128.5	9,888.9	9,642.5	2,311.2
New other residential buildings	2,722.9	2,625.5	2,518.5	2,899.4	2,995.4	1,208.7
Total new residential building	*11,158.7*	*11,276.4*	*7,646.9*	*12,788.3*	*12,637.9*	*3,519.8*
Alterations and additions to residential buildings(c)	*1,901.8*	*1,957.8*	*1,142.0*	*2,022.0*	*2,110.7*	*439.7*
Non-residential building—						
Hotels, etc.	929.6	1,139.9	2,296.3	1,337.3	1,328.4	1,298.1
Shops	1,917.6	1,994.3	1,893.5	1,910.3	2,050.3	942.3
Factories	1,475.8	1,503.6	1,094.8	1,591.0	1,642.2	492.5
Offices	4,253.3	3,776.4	9,308.1	4,251.0	5,397.8	4,240.8
Other business premises	1,591.7	1,630.6	1,422.0	1,780.0	1,734.4	685.5
Educational	1,070.0	1,172.4	1,088.6	1,135.5	1,091.1	585.5
Religious	73.6	80.3	59.9	87.2	86.8	27.9
Health	607.2	626.3	1,149.1	650.8	717.5	466.8
Entertainment and recreational	545.5	656.9	676.7	674.9	706.0	310.9
Miscellaneous	692.4	715.7	1,625.8	769.2	672.6	422.5
Total non-residential building(d)	*13,156.7*	*13,296.3*	*20,614.9*	*14,187.3*	*15,427.2*	*9,472.7*
Total building	**26,217.3**	**26,530.5**	**29,403.8**	**28,997.5**	**30,175.8**	**13,432.2**

(a) At end of period. *(b)* During period. *(c)* Valued at $10,000 or more. *(d)* Valued at $30,000 or more.

Constant prices

Estimates of the value of work done at average 1984–85 prices are presented in the following table. Constant price estimates measure changes in value after the direct effects of price changes have been eliminated.

VALUE OF BUILDING WORK DONE AT AVERAGE 1984–85 PRICES, AUSTRALIA
($ million)

	New residential building					
Year	*Houses*	*Other residential buildings*	*Total*	*Alterations and additions to residential buildings*	*Non-residential building*	*Total building*
1984–85	5,665.3	1,400.2	7,065.5	842.7	6,107.6	14,015.8
1985–86	5,552.9	1,307.0	6,859.9	953.4	7,425.5	15,238.8
1986–87	4,808.2	1,116.2	5,924.4	951.9	8,045.3	14,921.6
1987–88 r	5,314.9	1,170.2	6,485.1	1,071.2	9,223.6	16,779.9
1988–89 r	6,696.9	1,784.2	8,481.1	1,228.2	9,620.1	19,329.4
1989–90 p	6,036.8	1,969.9	8,006.7	1,308.9	10,171.2	19,486.8

Engineering Construction Survey

This section contains estimates of engineering construction activity in Australia by both public and private sector organisations.

These estimates together with results from the ABS Building Activity Survey provide a complete picture of building and construction activity in Australia.

Scope and coverage of the surveys

The Engineering Construction Survey (ECS) aims to measure the value of all engineering construction work undertaken in Australia. The cost of land and the value of building construction is excluded from the survey's scope. Where projects include elements of both building and engineering construction, for example, electricity generation and heavy industrial plant, every effort is taken to exclude the building component from these statistics.

Excluded from the survey are the following:

- Repair and maintenance activity;
- The value of any transfers of existing assets;
- The value of installed machinery and equipment not integral to the structure; and
- The expenses for relocation of utility services.

A contract for the installation of machinery and equipment which is an integral part of a construction project, is included in the statistics even though, in some cases, the activity in installing such machinery and equipment is classified to the manufacturing industry in the *Australian Standard Industrial Classification,* Volume 1 (1201.0).

The following tables show the value of engineering construction (ECS) activity by the private sector for the sector of ownership and by the public sector for the year 1989–90.

VALUE OF ENGINEERING CONSTRUCTION ACTIVITY BY THE PRIVATE SECTOR 1989–90 ($million)

	Commenced	*Work done(a)*	*Work yet to be done(b)*
FOR THE PRIVATE SECTOR			
Roads, highways and subdivisions	839.7	1,094.9	412.9
Bridges	12.5	14.3	6.8
Railways	13.3	15.2	4.7
Harbours	36.4	59.8	25.2
Water storage and supply	72.6	71.5	4.1
Sewerage and drainage	52.9	53.7	4.0
Electricity generation, transmission and distribution	86.4	73.1	36.9
Pipelines	72.8	81.7	12.5
Recreation	327.7	319.9	39.7
Telecommunications	7.1	6.4	2.5
Heavy industry	1,187.1	1,260.8	496.7
Other	35.9	34.9	3.7
Total	*2,744.3*	*3,086.1*	*1,049.7*
FOR THE PUBLIC SECTOR			
Roads, highways and subdivisions	806.4	836.5	243.1
Bridges	96.8	130.0	58.9
Railways	94.3	49.4	66.2
Harbours	46.6	37.8	23.4
Water storage and supply	146.1	128.8	93.3
Sewerage and drainage	150.5	192.0	76.2
Electricity generation, transmission and distribution	888.3	366.4	906.5
Pipelines	37.3	82.9	3.4
Recreation	66.2	62.0	9.8
Telecommunications	40.7	10.5	33.2
Heavy industry	17.5	106.6	51.3
Other	19.6	17.4	9.0
Total	*2,410.3*	*2,020.3*	*1,574.2*
TOTAL			
Roads, highways and subdivisions	1,646.0	1,931.4	656.0
Bridges	109.4	144.3	65.7
Railways	107.5	64.6	70.9
Harbours	83.0	97.6	48.6
Water storage and supply	218.7	200.3	97.5
Sewerage and drainage	203.4	245.7	80.2
Electricity generation, transmission and distribution	974.7	439.5	934.4
Pipelines	110.1	164.6	15.9
Recreation	393.9	381.9	49.5
Telecommunications	47.8	16.9	35.7
Heavy industry	1,204.6	1,367.4	548.0
Other	55.5	52.3	12.7
Total	**5,154.6**	**5,106.4**	**2,623.9**

(a) During period. *(b)* At end of period.

VALUE OF ENGINEERING CONSTRUCTION ACTIVITY BY THE PUBLIC SECTOR 1989–90
($ million)

	Commenced	*Work done(a)*	*Work yet to be done done(b)*
Roads, highways and subdivisions	1,411.1	1,390.0	299.2
Bridges	63.7	58.2	22.7
Railways	247.6	278.0	61.0
Harbours	40.4	30.3	28.1
Water storage and supply	395.3	379.0	478.9
Sewerage and drainage	446.1	353.5	334.2
Electricity generation, transmission and distribution	986.2	981.0	229.0
Pipelines	62.4	54.8	11.3
Recreation	77.7	69.9	15.5
Telecommunications	2,078.8	2,096.7	291.4
Heavy industry	71.2	73.1	—
Other	14.8	12.6	0.6
Total	**5,895.1**	**5,777.3**	**1,771.8**

(a) During period. *(b)* At end of period.

Construction Industry Survey

The Construction Industry Survey is a sample survey of private sector construction establishments and of public sector enterprises engaged in construction and repair and maintenance activities. The most recent survey was conducted in respect of 1989–90. For further details *see Year Book* No. 70.

The private sector collection was conducted as a component of the Bureau's integrated economic statistics program. This program 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, and electricity and gas industries and periodically for the transport, manufacturing, wholesale, retail and selected service industries.

Building Research Activity

The recently formed CSIRO Division of Building, Construction and Engineering continues as the main government funded building research body in Australia.

Staffed by some 200 researchers and technologists of international standing, their laboratories in Melbourne and Sydney contain the most extensive range of modern testing equipment in Australia. Close links are also maintained with leading overseas researchers and their specialist laboratories.

The work of the Division covers residential, non-residential, and engineering construction including all aspects of design, maintenance, construction, and planning. In addition to its research activities, it provides major support of national regulatory and standardisation processes, appraisal and testing of products, and a wide range of consulting services.

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PRESERVATION OF ROCK IMAGERY

(This special article has been contributed by Dr Graeme K. Ward, Australian Institute of Aboriginal and Torres Strait Islander Studies)

Introduction

Aboriginal Australia has a long history of artistic endeavour; pictures on rock, found throughout the continent, date from many millennia ago and continue into the present to be an integral and significant part of Aboriginal culture. In recent years, increasing numbers of tourists have sought to visit the extensive areas of rock imagery made accessible in Kakadu National Park and elsewhere; agencies with statutory responsibility for site management and Aboriginal communities both are expressing fear for the integrity of these sites. There is a need for conservation and management of such sites, both to preserve the fragile fabric of the imagery and its substrate from environment forces and to protect the places from visitors.

Australian Aboriginal Rock Pictures

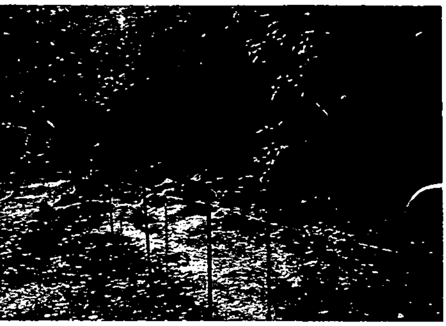
Rock pictures are widespread throughout Australia, being found from the far north—with notable concentrations in the Kimberley, Victoria River, Arnhem Land and Cape York Peninsula—through the Pilbara, Flinders Ranges, and Sydney Sandstone, to the Grampians in western Victoria and the ice-age caves of south-western Tasmania. Some consider the rock imagery of parts of Australia more than equal to that of Europe and elsewhere in terms of its extent, concentration and artistic significance. It appears (dating is ever subject to revision) as old if not older than that of Europe. Engraved walls excavated from beneath archaeological deposits in the Cape York area have been dated to more than 13,000 years ago (Rosenfeld *et al.* 1981). Pigments used in pictographs made on sandstone shelters in the far north of Australia have yielded a date of about twenty thousand years ago (Loy *et al.* 1990). 'Rock varnish' in petroglyphs in South Australia has been dated to greater than thirty thousand years ago (Nobbs and Dorn 1988). Red and yellow ochres, perhaps used in rock painting, have been recovered from contexts dated to 60,000 ago (Roberts *et al.* 1990).

It is useful to distinguish between rock engravings (petroglyphs), and paintings and drawings (pictographs). Petroglyphs are made by removing rock from the substrata—by pecking, hammering or abrading—leaving a negative impression (Figure 1). Pictographs are made by adding pigments to a rock surface; drawings are made onto walls using dry pigments, and paintings are made using wet pigments (Figures 2–8). Both are made by using brushes, fingers and palms or stencilling techniques.

The motifs represented in Australian rock pictures are very varied—appropriately enough given the tens of thousands of sites and range of environments in which they exist (McCarthy 1967). In what has been described as some of the stylistically earliest engravings found at Koonalda Cave in South Australia, simple, probably non-representational motifs predominate. Single or multiple parallel meandering lines appear to have been made by running fingers across the soft limestone and single shallow scratches made by incising with a sharp stone (Wright 1971). Elsewhere, petroglyphs form geometric figures; distinctive representations of bird and animal tracks; various fauna; items of cultural material (including tools, weapons and ritual objects); mythical figures such as the Rainbow-Serpent and even human faces. These might be singular motifs or groups forming scenes of hunting parties or dancers.

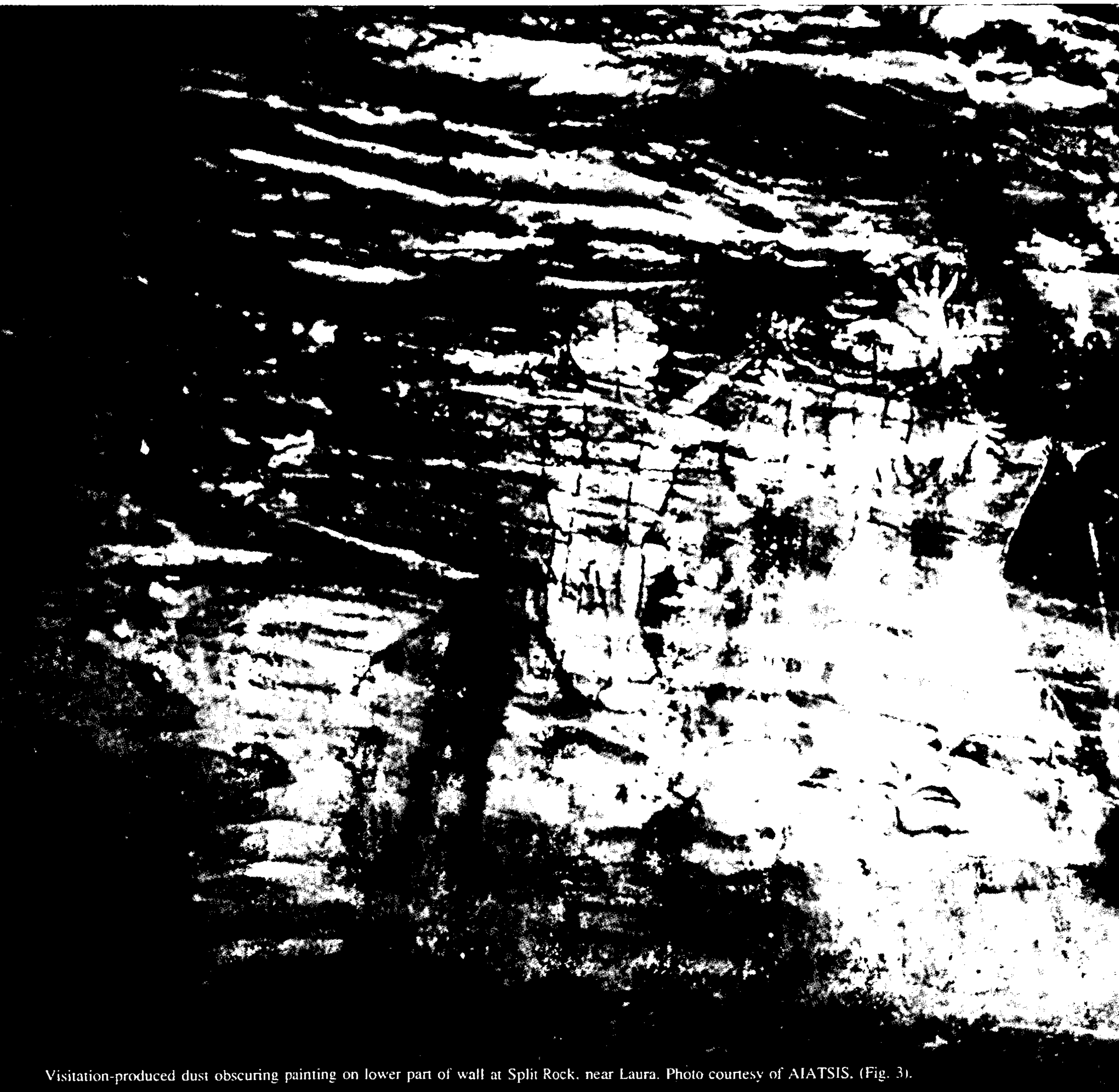
Pictographs embrace a similar range of subject matter but probably tend more to be representational than geometric motifs with the addition in many areas of hand stencils

Painted site near Ingaladdi Waterhole showing effects of water-wash, exfoliation of rock wall, and growth of *Ficus* species. Photo courtesy of AIATSIS (Fig. 4)



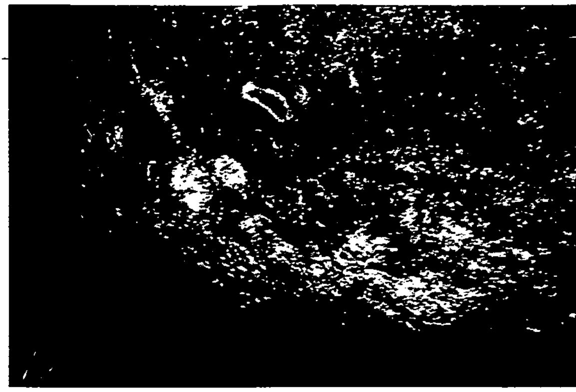
Fencing protecting small pictograph site at Kunawala, near Mt Hogath. Photo courtesy of AIATSIS. (Fig. 5).

Recently constructed elevated walkway at Split Rock. Photo courtesy of AIATSIS. (Fig. 7).

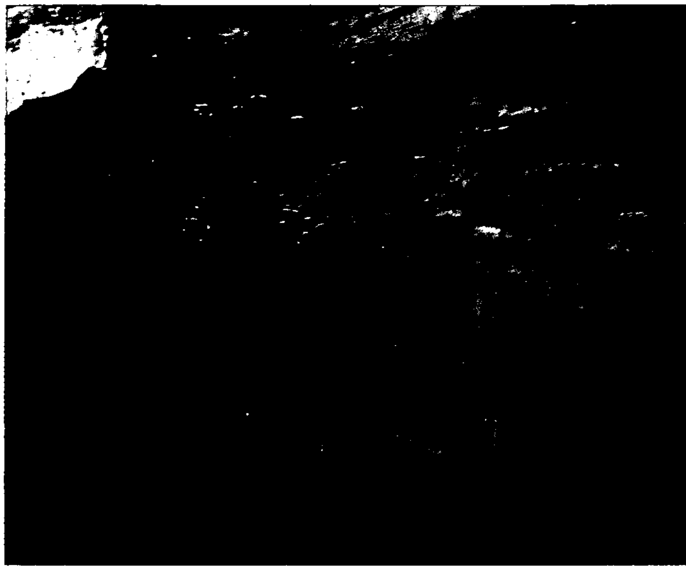


Visitation-produced dust obscuring painting on lower part of wall at Split Rock, near Laura. Photo courtesy of AIATSIS. (Fig. 3).

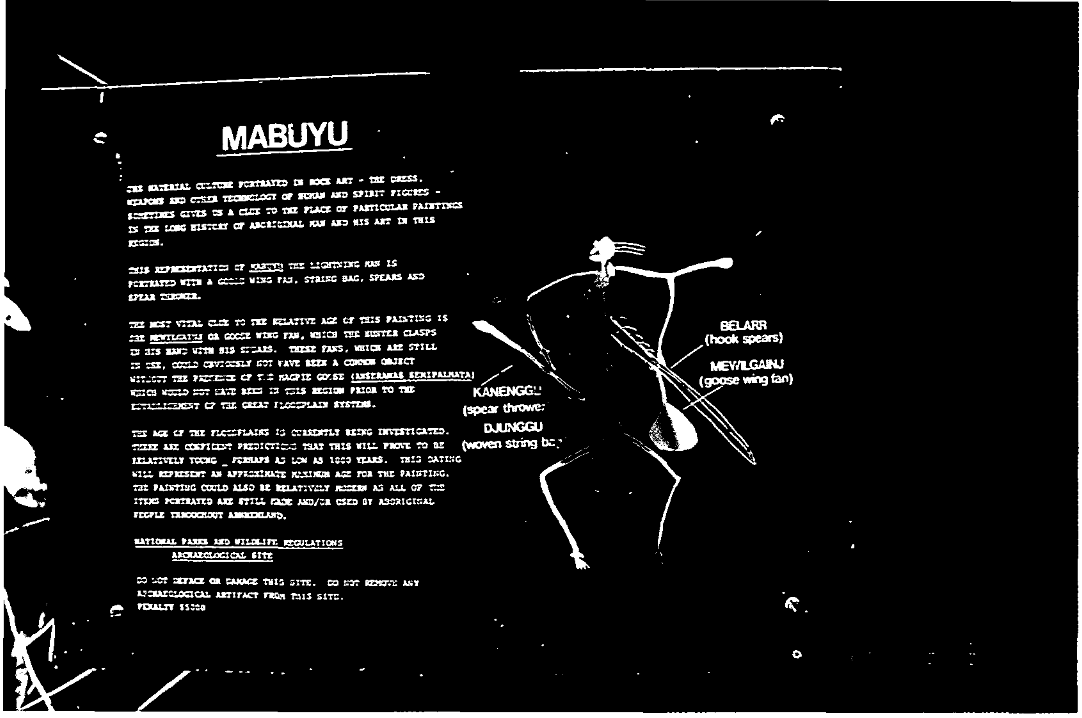
Recent vandalism (graffiti) of a painting site near Cape Cleveland. Photo courtesy of Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), Canberra. (Fig. 2)



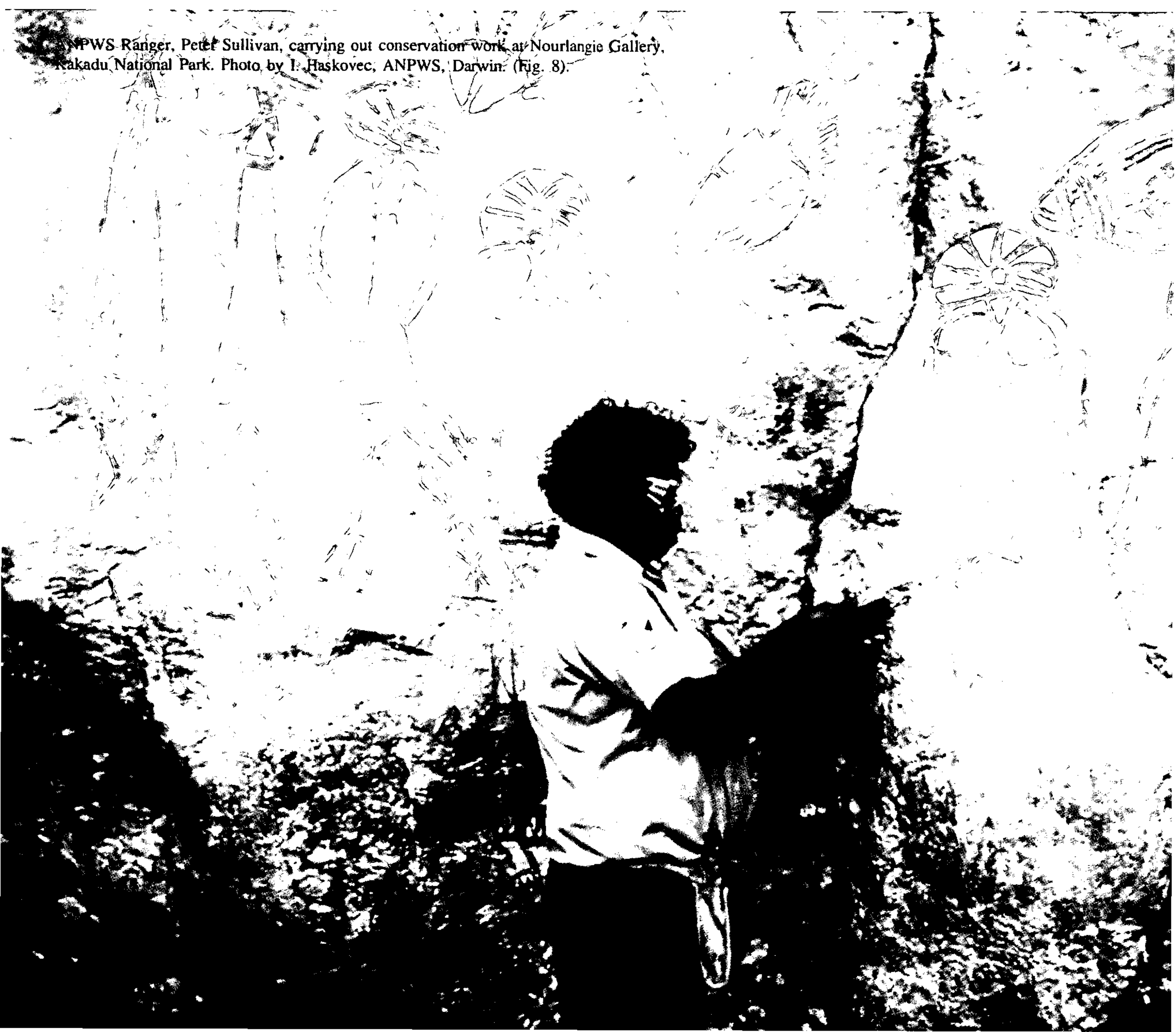
Recently constructed elevated walkway at Split Rock. Photo courtesy of AIATSIS. (Fig. 7).



Splitting and dislodging of boulder bearing petroglyphs, Spear Hill area, Pilbara Region. Photo by H.P. McNickle. (Fig. 1).



An informative sign in Kakadu National Park. Photo courtesy of AIATSIS. (Fig. 6).



ANPWS Ranger, Peter Sullivan, carrying out conservation work at Nourlangie Gallery, Kakadu National Park. Photo by I. Haskovec, ANPWS, Darwin. (Fig. 8).

and impressions, and a considerable array of anthropomorphic figures. Extensive and elaborate friezes of paintings with a variety of subject matter and much superimposition of motifs have been recorded throughout Australia. Pictographs also include items reflecting contact with other communities—Macassans in the north, large sailing ships and pearlers and luggers in various coastal areas, men on horseback and with cattle, dogs and guns in areas further inland. Several distinctive styles of rock painting have been defined, especially in the north, with the Bradshaw and Wandjina (in the Kimberleys), Mimi (stick figure) and X-ray (in Arnhem Land) being well-known.

It is not surprising that such a wealth of artistic endeavour has received considerable attention from researchers and tourists. Among the former, McCarthy (1967) has provided a useful overview. Many systematic and regional studies have been made and several of the more recent and accessible are included in the reading list. Examples of tourist interest can be seen in almost any travel brochure dealing with Australia's north. A recent survey of overseas visitors to Australia by the Australia Council, through the Bureau of Tourism Research, reported that: half of the overseas visitors were interested in seeing and learning about Aboriginal art, thirty per cent purchase an Aboriginal art or related item, and one-fifth went to a museum or gallery especially to see Aboriginal art. While questions specifically concerning rock pictures were not included, these data tend to support observations of increasing interest in visitation to Australian sites. Records made at Kakadu National Park show that, in 1987, at least 150,000 people (including nearly 86 per cent of all private visitors to the Park) visited one or more of the painted galleries at Ubirr, Nourlangie and elsewhere.

The need for protection

Concerted tourism uncontrolled tends to destroy the focus of its interest. That expanding type, 'heritage tourism', one interest of which is rock pictures, has the potential to damage irretrievably many sites, and there is increasing recognition of the need to develop and implement measures to protect the resource base. Heritage tourism has other negative facets.

Firstly, some Aboriginal communities do not want large numbers, or any, visitors to places which are culturally important to them; others want a share of the heritage tourism cake, and the problem for the community becomes one of balancing various facets of its interests, including conserving the sites themselves.

Secondly, there is a tendency to treat petroglyphs and pictographs as 'gallery art' comparable with the Western notion of 'fine art'. There is Aboriginal, and ethnographic, objection to this veneration of 'rock art' as 'art as object', valued for its antiquity and authenticity, a perception which tends to remove the imagery from its cultural context. This is particularly objectionable when that context currently is of significance to the originating community or its cultural descendants. A preferable view is that of 'art as process' in which the context within which the imagery is produced and used is more significant than the object itself, and one of the problems of conservation of rock imagery is maintaining in modern circumstances this perception of its context. Related to this is the controversy over 'retouch' or 'repainting' of imagery, a practice which is well-attested as commonplace in traditional Aboriginal cultures but opposed by some who stress the static, 'heritage' value of 'rock art'.

Thirdly, and most obviously, there is the continuing threat to the physical fabric of petroglyphs and pictographs. This derives from a wide range of sources, from surface and sub-surface water, frost, mineral salts, soil cover and vegetation, airborne dust, microflora, native and feral animals, vandals and other visitors (Figures 1–4). At some sites, the physical deterioration of the imagery since it was originally executed or last repainted, is plainly recorded in reports and photographs. The deterioration of images might be a direct function of the materials used. Engravings are easily made into the soft surfaces of the sandstone of the Sydney–Hawkesbury region and of southern Queensland; equally readily, these rocks deteriorate when exposed to weathering forces or are walked upon or brushed against; the vulnerability of such surfaces also encourages graffitists. The materials used to create the vibrant painted images found throughout Australia—oxides of iron and manganese, charcoal and clay—were mixed with water, and perhaps, fats, blood and other materials into a paste or solution to be blown from the mouth, applied by finger or brush of twig or feather, are not necessarily the mixtures most resilient (although some might combine chemically with the surface to which they have been applied) to exposure and changeable weather conditions, or brushing against by sweeping branches, cattle flanks or curious fingers. After prolonged weathering many pigments remain only as chemical 'stains'.

The need to develop conservation measures for petroglyphs and pictographs became increasingly apparent in Australia during the last few decades. As part of a federally-funded national program beginning in 1973 and administered by the Australian Institute of Aboriginal Studies (AIAS), a conservator was employed at the Western Australian Museum to develop and implement conservation strategies, this work by John Clarke also provided the basis of conservation projects elsewhere in Australia and prompted increasing awareness of the extent of the threat to rock imagery. During the mid and late 1970s meetings in Hobart, Perth and Sydney identified various problems and discussed possible solutions. Specialist studies of problems of the conservation and management of painting sites in Kakadu National Park were published (Gillespie 1981) emphasising the magnitude of the conservation problem throughout Australia. Another meeting, held at Kakadu National Park in 1983 involving many Aboriginal people, considered problems of visitor access and control at Aboriginal sites (Sullivan 1984). An initiative of the four Australian Academies prompted two studies: Professor Fay Gale and her students investigated the behaviour of tourists at painted sites in Kakadu National Park (Gale and Jacobs 1987); Dr Andrée Rosenfeld synthesised existing knowledge of the causes of deterioration and means of preservation of petroglyphs and pictographs (Rosenfeld 1985). These reports served as points of departure in two of the major areas being developed, that of physical conservation and that of visitor management.

The Australian Institute of Aboriginal Studies' Rock Art Protection Program

A reviewer had recommended that AIAS undertake a study of rock art conservation and this proposal was supported by the then Minister for Aboriginal Affairs, the Hon. Clyde Holding. The Minister asked AIAS to administer a program for the 'protection of Aboriginal rock art' (Ward and Sullivan 1989). Funds for this purpose were provided from the Commonwealth Government's 1987 Budget and in subsequent years. The level of interest in, and need for, the program was reflected in the number of applications and level of funding sought. In the initial year, thirty applications for funding were received totalling nearly half a million dollars, despite the fact that only $150,000 was available; comparable levels were sought in subsequent years (Ward 1989).

The Institute took a broad view of the term 'protection' and allocated funding to applications in four categories: survey and recording, including inventory and evaluation; physical protection measures and visitor control studies; research into physical conservation techniques; and public awareness/training programs. Examples of projects are considered below.

A conservation manual for use by site managers

The Institute has supported formal training of site conservators at the then Canberra College of Advanced Education, and several graduates of the successful CCAE/Getty Conservation Institute course are now working in various fields within Australia. At the same time, there clearly was a need for a manual which described various simple but useful techniques that site managers could apply to endangered imagery or sites as a whole. With funding from the Rock Art Protection Program (RAPP), David Lambert, a geologically-trained conservator working with the New South Wales National Parks and

Wildlife Service at Gosford, took six months leave to prepare and write the manual. He visited sites throughout Australia to extend his experience of conservation problems peculiar to different regions and to discuss the particular concerns of site managers in each State and Territory. The understanding that he gained of problems faced by conservators and his direct experience in working with a wide variety of painting and engraving sites is evident in his report to the Institute which, avoiding duplication of Rosenfeld's discussions, concentrates on methods of treating particular problems in the field. He deals with, in turn: methods of minimising frost and water damage; of treating salt decay, including the use of a 'sacrificial render'; the safe removal of soil cover and vegetation affecting surfaces; the removal and control of microflora (algae, lichen, fungi and bacteria); and the treatment of damage by animals, insects, birds, macropods, domestic stock and feral animals, including the removal of wasp's and bird's mudnests and the repair of any damage. There is an extensive section on the management of sites to reduce the impact of visitors with reference to case studies on the use of walkways at Mootwingee (Western NSW), Carnarvon Gorge (south-central Queensland), Ubirr (Kakadu National Park) and Bulgandry (near Gosford, NSW). This is followed by practical advice on the removal of graffiti (and reducing its incidence), and the highlighting of engravings for public display. The last chapter deals with specialised techniques for the conservation of paintings (including the identification of pigments and the use of consolidants) and the reduction of weathering of engravings. One of the appendices deals with simple analytical techniques which will not be available to fieldworkers although knowledge of it and other more complex procedures dealt with by Lambert will help the site manager know when to involve a trained conservator.

The last appendix contains the Australian International Council on Monuments and Sites (ICOMOS) Charter ('The Burra Charter') which Lambert suggests serves as the guide for conservation action at any site. The volume contains a useful index. It was published in 1989 by the AIAS in its report series (Lambert 1989).

Physical protection of visited sites

Much of the support provided by the program has gone to State and Territory heritage protection agencies and to land managers to assist with the physical protection of petroglyph and pictograph sites which are the subject of visitation by tourists.

The Western Australian Museum has received funding from the Rock Art Protection Program for a project designed in consultation with the Ngarla and Coastal Njamal Aboriginal Corporation and which involved the members in the construction of fencing and other protective measures of an important site at Port Headland. The Northern Australian Museum of Arts and Science successfully sought funding on behalf of Aboriginal traditional owners for major fencing projects in the top end of the Northern Territory (Figure 5). The Conservation Commission of the Northern Territory received funds for projects designed to record sites in newly established national parks, and to establish, in consultation with the Aboriginal custodians in each area, which places might be visited and thus needed management with walkways and other visitor facilities. The South Australian Aboriginal Heritage Branch used funding from the program to build visitor control facilities at Akaroo in Wilpena Pound. The Queensland National Parks and Wildlife Service has developed protection projects at sites such as Nara Inlet on Hook Island, Kenniff Cave in the South-Central Highlands, and at Balancing Rock in Donna National Park near Chillagoe; the Quinkan Reserve Trust has received funding for site conservation measures designed to prevent visitor-induced dust from coating the painted rockface at the popular site of Split Rock near Laura. The New South Wales National Parks and Wildlife Service obtained funds for several projects not only designed to provide physical protection of sites but also to enhance visitor appreciation of the rock pictures at them by using the results of research to develop informative signage and brochures (Figure 6). The Victoria Archaeological Survey used program funds to remove graffiti from sites in the Grampians National Park which also has been the focus of research into the effect of substrate salts upon painted walls; as well, the RAPP is funding research there which seeks to develop methods to remove salts deposited over paintings. The Tasmanian Department of Parks, Wildlife and Heritage used RAPP funds to implement the extensive protection measures necessary to preserve the famous Mount Cameron West engraving site.

The situation at Nara Inlet was unusual in that the site is relatively inaccessible by land but is well-known due to its location in the most popular recreational boat anchorage in the Whitsunday Islands. The project aimed to limit damage to the paintings there by controlling access to the site by placement of a boardwalk and, by providing informative signs, enhancing appreciation of the cultural context of those paintings. The Royal Australian Corps of Transport assisted with the difficult business of getting material to the shelter.

The same conditions in a shelter which provide for the preservation of paintings often contribute a permanently dry floor deposit; if the substrate is suitably fine-grained, there will be a fine dust layer at the foot of the painted surface and this is readily disturbed by animals and tourists. Moreover, dust might become bonded to the rock surface in the presence of airborne salts, and largely obscure the pictographs (Figure 3). A visitor boardwalk has been built at the Split Rock site near Laura on the Cape York Peninsula. Additionally, extensive mulching and suitable native plants were added to the immediate environs of the shelter to prevent fine dust from being disturbed from the dry floor deposit and settling on the painted surface (Figure 7). Comparison of recent photographs of the site with those made several years ago demonstrate the extent to which the imagery has been dulled by dust. The consultant engaged to oversee the protection works at Split Rock had been trained in rock art conservation at the Canberra College of Advanced Education (now the University of Canberra); he had sampled the dust layer for analysis and identification so as to advise upon the possibility of its removal. Not all airborne materials can be removed from painted surfaces without damaging the imagery.

The case for conservation at Split Rock was of particular importance; the site is well-known to travellers along the Cape York Peninsula Development Road and is seen by thousands of visitors each year. Some basic protective measures were in place but these were inadequate and did not deal with the problem of dust. The Laura area contains thousands of pictograph sites with extensive and spectacular imagery but Split Rock is the only one readily accessible from the road and perhaps the only example to be seen by most visiting the area. Its dust-affected and worsening condition presented an unfortunate example to the visitor giving a poor impression of some of the best pictographs in the world. Unfortunately this impression has been easily gained by less sympathetic visitors to Aboriginal Australia in general.

Silica skins: their potential for protection and dating

Researchers recording pictographs have noticed a clear or slightly milky film covering images or parts of images at many sites, especially those in the north of Australia. This film was identified as being composed of silica; it was observed to be deposited by ground water from siliceous rocks. It was considered to be detrimental to the imagery, particularly when it was thick enough to be opaque or became discoloured, and silicone drip-lines were installed to direct water flow away from paintings. However some argued that this phenomenon had the potential to preserve paintings by sealing them and thus protecting them from various sources of damage.

The program provided a grant to a geochemically-trained conservator, Alan Watchman, who conducted a series of studies while a Visiting Fellow at the Australian National University. Watchman reported (1989, 1990) that silica skins:

- were formed by complex interactions among rainwater and groundwater, rock substrata, micro-organisms and climate;
- formed on different rock types in various climates; and

- were physically and chemically complex and might contain several minerals and organic materials in dynamic relationships.

Pigment applied to a rock face could be incorporated into the silica skin by microbiological activity and thus be strongly bonded to the underlying rock and preserved. He recommended that silica skins should be encouraged rather than prevented from forming on painted surfaces, as they assisted in maintaining the rock surface. Diversion of water from painted surfaces may adversely affect their natural preservation. The replication of naturally produced silica skins was not possible because of the complexity of the bio-geological processes involved at the rock surface. There was going to be no 'spray-can' solution to the problem of the preservation of rock paintings!

Watchman found that the micro-organisms encapsulated within the silica skins could provide organic matter which, when converted to carbon dioxide, could be used to date the formation of that layer by analysis of radiocarbon using Accelerator Mass Spectrometry (AMS). Moreover, the potential exists for dating silica skin layers by other cosmogenic methods, and study of some stable isotopes could help characterise the environment and climate at the time when paintings were sealed by the silica skins. Thus, the possibilities had been enhanced for understanding much more about the context of the painters and their paintings.

Related work conducted at the Australian National University and techniques developed in Arizona have provided further opportunities to view the prehistoric painters and engravers of Australia. From a series of studies at the Australian National University of ancient residues on stone tools came a successful attempt to identify the organic materials used to bind the ochres and other pigments used in pictographs. Human blood was used for this purpose in both the south-west of Tasmania and in the Daly River area of the Northern Territory. Extracts of blood protein were used to estimate, using AMS analysis of carbon these provided, the ten and twenty millennia dates for these respective pictograph sites (Loy *et al.* 1990).

Dating the organic component of an added pigment or a sealing siliceous film is all very well but what about the possibility of dating the negative impressions on rock which are engravings? A new technique called 'cation-ratio analysis', developed to date rock screes in the deserts of Arizona, have been applied to rock engravings in the Olary region of South Australia (Nobbs and Dorn 1988). Cation-ratio dating depends upon the micro-chemistry of rock varnish, a thin coating of minerals that develops upon rock surfaces particularly in arid regions. The ratio of potassium plus calcium ions to chemically stable titanium ions in the varnish has been shown to change over time. The correlation of this cation-ratio with AMS radiocarbon ages has allowed rock varnish to be used as a dating tool. Application of the technique in the Olary region has produced estimates of dates of between 1,400 and 31,700 years ago for a variety of motifs.

Apart from its own intrinsic interest, the application of such techniques is central to the conservation of rock pictures in that many studies of deterioration occurring at rock faces require such fundamental information in order to provide for complete understanding of those physical processes. The dating of sites was an essential part of this: were these engravings or paintings the results of the last few hundred years or were they several thousand years old? How long had there been for the interplay of forces which had led to the preservation or partial destruction of the pictures? The technological revolution during the 1980s in the dating of paintings and engravings had provided the methods to obtain a good idea of the scale of time involved, and this is fundamental to the development of sound strategies for the protection of sites. Moreover, it is clear that the considerable antiquity of a place or a set of cultural attributes such as rock imagery increases the status of that place or attribute in the eyes of the public and that this appreciation is more likely to enhance the conservation of rock pictures.

Aboriginal interests

This talk of high technology in the service of rock pictures should not take us too far from another fundamental reality of their preservation, the interest of the Aboriginal peoples whose cultural ancestors were responsible for its production and continued preservation in the past and who continue today to produce and maintain rock images. Aboriginal communities wish to control access to and use of places containing rock pictures, especially where sites are of ritual significance. In many places this control has been formalised, as at Kakadu National Park (Figure 8). Two recent studies emphasise the importance of recognition of Aboriginal interests.

Maintenance of culture, and the national heritage

It is well documented that diverse motifs in various parts of Australia have been repainted many times. A Western Australia study reported sixteen layers of paint at one site; Watchman found layers of pigment separated by layers of silica. Repainting was done to maintain the cultural integrity of sites. At the AURA Congress in Darwin in September 1988, David Mowaljarlai, a traditional man from the Mowanjum Community of Derby in Western Australia, presented a paper which stressed the importance and significance of a range of sites in terms of Aboriginal cosmology, and his community members' strongly felt commitment to the land from which they came and which sustains them. This statement subsequently was published in the British journal *Antiquity* (Mowaljarlai *et al.* 1989; also Mowaljarlai and Peck 1988). Mowaljarlai went on to outline the course of a project to repaint sites in the Kimberley area as part of a plan to revive and maintain traditional values even in the context of a rapidly changing social environment. The project had been opposed by non-Aboriginal landholders and persons concerned to protect the integrity of 'rock art' as 'national heritage'. A study conducted by the Department of Aboriginal Sites of the Western Australian Museum which has statutory responsibility under the Western Australian *Aboriginal Heritage Act 1972–1980* for such sites, concluded that there was little substance to the complaints being made and that no action was warranted under the Act. Similar opposing positions were taken in discussions at the conference.

Such incidents highlight the fact that sites with rock imagery can have multiple values and that those values may be very different to different community groups. This poses problems for cultural heritage managers and conservators who then are faced with the problem of which conservation alternative to emphasise. Some guidance is provided by the Burra Charter which stresses that the significance or value of a site dictates conservation practice. In the case of the Kimberley repainting, the Western Australian Museum assessment determined that the primary significance of the sites resided in their importance to the Aboriginal community as part of a long tradition.

There is an interesting conflict between two sorts of preservation here. The national heritage argument sees the value of the paintings being destroyed or at least significantly lessened as 'art' as a result of their repainting; that the paintings would continue to fade or otherwise deteriorate over time does not seem to be a major concern. The Aboriginal heritage argument stresses the value of the place—only incidentally the paintings—in terms of the process of maintaining cultural links with the country; that the 'presence' of the paintings and their longevity is enhanced at the same time appears only incidental.

Managing the dreaming

The second example of Aboriginal interest in the protection of rock imagery is also a final example of a project funded by the RAPP, one which has implications for a program of action to preserve Australian rock paintings and engravings. A project carried out by Darell Lewis and Deborah Rose in the Victoria River area of the Northern Territory considered in detail the significance to the local community of sites which they had recorded there.

They distinguished two main categories of imagery, the first identified by Aboriginal people as originating with them is concerned mainly with sorcery, while the second comprises images not recognised as being made by humans to represent Dreaming Beings but rather, it is said, such images are made by Dreaming Beings and are Dreaming Beings; they are the "... shape of the Dreaming, the living presence, in past, present and future time of the origins of the cosmos" (Lewis and Rose 1988:50); the cultural meaning of the paintings depends upon a knowledge which is beyond the depictions themselves. The researchers set these ideas in the context of the Aboriginal concept of 'country', the relationships between people and country, and those among people themselves, all of which relate to the processes of maintaining Aboriginal cultural integrity. This is especially so in relation to non-Aborigines and the non-Aboriginal pressures impacting upon the country and its people, one aspect of which is the protection from outsiders of access to sacred knowledge.

All of this is related directly by the researchers to the preservation of the paintings. Referring to the emphasis in the Burra Charter on conservation as "... all the processes of looking after a *place* so as to retain its *cultural significance*" (1979/1988:1.4) the researchers argue that physical intention by non-Aborigines could seriously undermine the Aboriginal cultural significance of a place. Their solution—derived from discussions with the Aboriginal community—emphasises the concerns of the traditional custodians, recognising their community status and traditional responsibility. Lewis and Rose detail a series of steps designed to give local Aboriginal communities direct and practical responsibility for the protection and maintenance of their own sites; certainly they recommend (1988:70) that "... no physical intervention ... be undertaken with respect to 'art' in the area except at the express and voluntary request of the Aboriginal custodians".

Such is the practice today of responsible conservators and site managers; the RAPP requires Aboriginal interests to be assessed and used as a guide in the drawing up of the proposal for conservation funding and the implementation of protective works. The results have been manifest in a variety of ways, from emphasis upon priority being given to surveys of sites and assessment of their cultural significance in areas of Aboriginal concern with actual or proposed land use, to the improvement of signage with relevant cultural text at visitation sites. The continued demand for funding for a variety of such projects indicates that the interest in and concern for the preservation of rock pictures in Australia is growing as the imagery becomes better known and is increasingly the focus of visitation both by Australians and overseas tourists. The challenge is to ensure that protective measures are relevant to the interests of all the community.

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21

TRANSPORT AND COMMUNICATIONS

This chapter contains information on transport and communications and the 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—ATAC

In April 1946, the Commonwealth Government and the State Governments agreed to establish a coordinating and advisory council at ministerial level with the principal function of reviewing 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 comprises Commonwealth, State and Territory ministers responsible for transport, roads and marine matters. The New Zealand Minister of Transport, Civil Aviation and Meteorological Services is also represented on the Council as an observer.

At present, the Council meets annually and its primary role is to review and coordinate various aspects of transport policy, development and administration. The Council functions through initiating discussion and reports on any matter raised by Council members, and by providing advice on matters which will promote better coordination and development of transport to the benefit of Australia. The Council has one policy advisory group reporting directly to it, the Standing Committee on Transport (SCOT). The Committee comprises a representative of each ATAC minister, usually the heads of the relevant departments, and deals with overall issues of policy coordination and development. The Committee is supported by four groups of specialist advisers covering 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;
- Road User Safety Advisory Committee;
- Licensing and Traffic Codes Committee;
- Advisory Committee on Transport of Dangerous Goods;
- Vehicle Standards Advisory Committee;
- Advisory Committee on Vehicle Emissions and Noise; and
- Australian Motor Vehicle Certification Board.

Australian Road Transport Advisory Committee—ARTAC

This Committee was established in April 1990 as part of the continuing push to reform the land transport sector. It replaced an earlier body, the Australian Road Freight Transport Advisory Committee which was established in 1985.

Its function is to provide the Minister for Land Transport with direct industry based advice on all aspects of the road transport industry. The specialist advice from the Committee will also assist in the task of more fully integrating road and rail with other forms of transport.

Bureau Of Transport And Communications Economics—BTCE

The Bureau is a centre for applied economic research in the Department of Transport and Communications. It undertakes studies and investigations that contribute to an improved understanding of the factors influencing the efficiency and growth of the transport and communications sector and the development of effective transport and communication policies.

The Bureau regularly publishes the results of its research work and its publications are available through the Commonwealth Government Bookshops in capital cities.

Civil Aviation Authority—CAA

The CAA is a Government Business Enterprise (GBE) established under the *Civil Aviation Act 1988*. It commenced operations on 1 July 1988.

The Authority is responsible for the safety regulation of civil aviation in Australia. It also provides air route and airway facilities and associated services to the aviation industry, including air traffic control, flight service, rescue and fire fighting, search and rescue and aeronautical information.

Over 80 per cent of CAA's income comes directly from aircraft operations in the form of service and facility charges.

The Authority represents Australia on the Council of the International Civil Aviation Organisation (ICAO) based in Montreal. The CAA is able to offer consultancy and management services both within and outside Australia.

Federal Airports Corporation—FAC

The Federal Airports Corporation is a GBE established by, and incorporated under, the *Federal Airports Corporation Act 1986*.

On 1 January 1988, the FAC assumed ownership, management and development of Australia's major airports and for the commercial activities in the airports, including arrangements with airlines and other operators for the use of airports and for leasing of property and the letting of business concessions.

The Federal Airports Corporation has responsibility for the following airports:

- NSW—Sydney (Kingsford Smith) Airport, Bankstown, Hoxton Park and Camden;
- Vic.—Melbourne, Essendon and Moorabbin;
- Qld—Brisbane, Archerfield, Townsville, Mount Isa and Coolangatta;
- SA—Adelaide and Parafield;
- WA—Perth and Jandakot;
- Tas.—Hobart, Launceston and Cambridge;
- NT—Darwin, Alice Springs and Tennant Creek; and
- ACT—Canberra.

The Corporation is a statutory transport business undertaking of the Commonwealth and is required to act in accordance with sound commercial practice. It is commercially flexible and responsive in order to make changes and act in a timely manner to meet the requirements of a dynamic market.

Like any business, the Corporation is required to be financially self-supporting. It has been established with a capital base and debt/equity ratio determined by the Commonwealth Government in accordance with the FAC legislation.

THE TRANSPORT INDUSTRY

Transport Industry Survey

This section contains statistics obtained from a survey of transport establishments conducted in respect of 1983–84 (referred to as the Transport Industry Survey). This survey was the first of its kind conducted in Australia and included establishments predominantly engaged in providing passenger or freight transport services for hire or reward by road, rail, water and air transport (collectively referred to as the modal transport industries) plus freight forwarding.

The survey was conducted as a component of the Australian Bureau of Statistics integrated economic statistics system and the results are comparable with economic censuses and surveys undertaken annually for the mining, manufacturing and gas industries and periodically for the wholesale, retail and selected service industries.

Summary of operations

The following table shows key items of data by industry mode for transport establishments in Australia, for the year 1983–84. The industries described are based on the 1983 edition of the Australian Standard Industrial Classification (ASIC).

TRANSPORT ESTABLISHMENTS: SUMMARY OF OPERATIONS BY INDUSTRY MODE, AUSTRALIA, 1983–84

ASIC Code	*Description*	*Establishments at 30 June 1984*	*Average employment over whole year(a)*	*Wages and salaries (b)*	*Turnover*	*Stocks*		*Total purchases, transfers in and selected expenses*	*Value added*	*Fixed capital expenditure less disposals*
						Opening	*Closing*			
		No.	No.	$m	$m	$m	$m	$m	$m	$m
511	Road freight transport	32,943	99,606	902.5	5,187.3	47.4	49.8	2,921.8	2,267.8	237.6
512	Road passenger transport	10,615	45,841	571.2	1,528.6	34.0	37.4	593.5	938.5	56.4
5200	Rail transport	12	86,721	1,688.5	3,314.8	178.9	179.4	1,417.5	1,897.8	406.9
53	Water transport	165	8,978	212.7	1,238.9	14.9	14.7	814.5	424.3	23.2
54	Air transport	334	23,597	600.8	2,958.0	20.4	19.9	1,747.9	1,209.6	178.1
51–54	**Total modal transport**	**44,069**	**264,743**	**3,975.7**	**14,227.6**	**295.6**	**301.2**	**7,495.2**	**6,738.0**	**902.2**

(a) Includes working proprietors and partners. *(b)* Excludes the drawings of working proprietors and partners.

Business Vehicle Survey

Concurrent with the Transport Industry Survey (TIS), the Bureau conducted a Business Vehicle Survey (BVS) to obtain a more complete picture of road freight transport activity in Australia. This involved the collection of road freight transport information from a sample of private enterprises whose main activity was not road freight transport but who operated at least one truck with a gross vehicle mass of 2.7 tonnes or more and used that truck to carry freight on public roads.

Results from the TIS and BVS were combined to produce estimates of road freight activity as shown in the following table.

ROAD FREIGHT ACTIVITY OF PRIVATE ENTERPRISES: SUMMARY OF ACTIVITY BY INDUSTRY DIVISION, AUSTRALIA, 1983–84

ASIC Code	Description	Enterprises at 30 June 1984	Trucks operated at 30 June 1984			Truck drivers at 30 June 1984			Wages and salaries paid to truck drivers(a)	Freight carried on trucks (b)
			Rigid	Articulated	Total	Working proprietors/ partners	Employees	Total		
A	Agriculture, forestry, fishing and hunting	85,796	105,446	8,163	113,609	11,727	3,416	15,143	35.3	58.5
B	Mining	557	2,151	424	2,575	62	1,810	1,872	37.6	17.3
C	Manufacturing	8,109	21,545	2,867	24,413	694	16,049	16,743	279.0	43.8
E	Construction	12,383	18,327	1,494	19,822	2,066	4,860	6,926	79.8	40.1
F	Wholesale and retail trade	19,333	34,222	3,544	37,766	4,070	16,885	20,955	297.9	55.8
511	Road freight transport	32,616	36,535	21,307	57,842	28,147	27,818	55,966	501.5	362.1
512–580	Other transport and storage	742	1,237	251	1,488	157	684	841	13.0	5.2
G	Total transport and storage	33,358	37,772	21,558	59,330	28,305	28,502	56,807	514.5	367.3
I	Finance, property and business services	1,718	3,725	922	4,647	97	2,612	2,710	51.0	11.4
K	Community services	1,055	2,277	42	2,319	500	1,187	1,688	20.4	6.5
L	Recreation, personal and other services	1,773	2,523	159	2,682	247	677	924	10.0	6.2
	Total	**164,081**	**227,988**	**39,174**	**267,161**	**47,769**	**75,999**	**123,768**	**1,325.5**	**606.9**

(a) Excludes the drawings of working proprietors and partners. (b) Estimates of freight carried relate to freight uplifted by trucks and therefore, to the extent that transshipment occurs (i.e. the transfer of freight from one truck to another), estimates of freight carried will overstate the actual physical quantity of freight moved.
NOTE: Road freight activity data collected from road freight establishments included in the TIS has been tabulated against the industry to which the enterprise of the road freight transport establishment is classified, e.g. the figures for a road freight establishment of a manufacturing enterprise would be tabulated against ASIC Division C.

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 (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 *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*, the *Navigation (Protection of the Sea) Amendment Act 1983*, the *Australian Coastal Shipping Commission Act 1956*, the *Environment Protection (Sea Dumping) Act 1981*, the *Submarine Cables and Pipelines Protection Act 1963*, the *Lighthouses Act 1911*, the *Marine Levy Act 1989*, the *Marine Levy Collection Act 1989*, the *Explosives Act 1961*, the *King Island Shipping Service Agreement Act 1974*, the *Bass Strait Sea Passenger Service Agreement Act 1984*, the *Ship Construction Bounty Act 1975*, the *Bounty (Ships) Act 1980*, the *Bounty (Ship Repair) Act 1986*, the *Australian Shipping Commission (Additional Capital) Act 1985*, the *Ships (Capital Grants) Act 1987*, the *Trade Practices Act 1974* Part X (as amended by the *Trade Practices (International Liner Cargo Shipping) Amendment Act 1989)*, the *Shipping Registration Act 1981*.

Navigation Act

The *Navigation Act 1912* (as amended), 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).

Regulations and orders under the Act 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 outlined below.

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 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 been left behind; and inquiries into deaths at sea. 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.

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. While in Australia, all ships which trade interstate or overseas come under the survey provisions of the Navigation Act and require certificates issued or recognised by the Department of Transport and Communications, 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 or substandard.

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 give effect to IMO resolutions on this sector of the marine industry.

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 and are not subsidised by foreign governments. 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 these conditions and to operate in the Australian coastal trade. Provision exists for unlicensed vessels to carry interstate cargoes under single or continuous voyage permits in certain circumstances where licensed vessels are not available or are inadequate to meet the needs of the trade.

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

Under the *Transport and Communications Legislation Amendment Act (No. 2) 1989*, the provisions relating to Courts of Marine Inquiry and the investigation of marine accidents were repealed. The repeal came into effect on 3 September 1990. From that date marine accidents investigations and inquiries will be conducted under the provisions of the Navigation (Marine Casualty) Regulations.

Shipping Registration Act

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 *Merchant Shipping Act 1894* (UK) 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 and encumbrances.

The Act was amended in 1985 to improve the general administration and the protection of registered and unregistered interests.

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 and discharge of mortgages and the entry of this information into the Register. Caveats can be lodged to protect unregistered interests.

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.

Miscellaneous

This part deals with liabilities of ships not registered, the appointment of registered agents, alterations to a registered ship, forfeiture and detention of ships, taking officers to sea, false statements, offences, evidentiary provisions, review, jurisdiction and appeals, preservation of State and Territory legislation and regulation making powers.

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. This part is now largely non-operative.

Ships (Capital Grants) Act

The *Ships (Capital Grants) Act 1987* provides shipowners with a taxable grant of seven per cent of the purchase price of eligible new trading ships. The legislation defines the conditions and procedures under which a grant may be paid. Briefly, the Act requires that ships hold a category certificate and be crewed in accordance with crewing benchmarks specified for that category, be registered in Australia and crewed with Australian residents. As part of its Shipping Reform Strategy, the Government has extended the grant provisions to new vessels introduced before 30 June 1997—a five year extension of the Act. Existing Australian vessels which undergo structural or equipment changes and allow a reduced crew level are eligible for grants. In this case a grant is payable at a rate of seven per cent of the cost of the modifications.

Lighthouse Act

The Lighthouse Act provides legislation for the provision and operation of marine navigational aids. It describes powers and details offences.

Marine Navigation Levy Act

The Marine Navigation Levy Act came into force on 1 July 1990. It imposes a levy on certain sea-going ships and specifies the amount to be levied.

Marine Navigation Collection Act

The Marine Navigation Collection Act came into force on 1 July 1990. It provides for the collection of the Marine Navigation Levy. It indicates liability for the levy, when and to whom the levy is payable, and recovery or remission of the levy where appropriate.

ANL Limited

ANL Limited is an incorporated public company, all the shares of which are owned by the Commonwealth. It is Australia's national shipping line.

ANL Limited was created on 1 July 1989 under the *ANL (Conversion into Public Company) Act 1988*. The Company is the successor to the Australian Shipping Commission (trading as the Australian National Line) which was created in 1956 as the Australian Coastal Shipping Commission.

Incorporation has enhanced the Line's freedom to manage itself on a day-to-day basis and its ability to compete on equal terms with private shipping operators. Accountability is maintained through strategic oversight, by monitoring corporate plans and financial targets.

As at 30 June 1990, ANL operated a fleet of 14 ships comprising ten ships in overseas trades and four in coastal trades and having a combined deadweight tonnage of 651,000 tonnes. The overseas fleet includes seven liner ships totalling 171,000 deadweight tonnes, a specialised car carrier of 9,000 deadweight tonnes and two bulk carriers totalling 279,000 deadweight tonnes. On the coast, ANL operates three bulk carriers totalling 185,000 deadweight tonnes and a roll-on roll-off ship of 7,500 deadweight tonnes.

In November 1988, ANL merged its container terminal and stevedoring operations with those of James Patrick and Company Pty Ltd to operate as National Terminals (Australia) Limited (NTAL). ANL is the majority shareholder with 60 per cent of the shares and Patricks holds the other 40 per cent. NTAL is one of Australia's two largest container terminal operators with terminals at Sydney, Melbourne, Freemantle and Tasmanian Ports.

From 1983 to 1988, affected by the general downturn experienced by the shipping industry, ANL implemented a program of rationalisation and withdrew from unprofitable services. This saw fleet numbers fall from 33 in 1983 to 12 in early 1989. With the current upturn in the shipping industry, ANL is now in the process of replacing its ageing fleet with modern, fuel-efficient, low-crewed vessels. Two additional ships joined the fleet in May and June 1989. ANL has also placed orders for two cellular container vessels to be built in Korea for use in its Asian liner trades and two roll-on roll-off vessels, one to be built in Singapore and one in Newcastle, for the coastal trade.

The Line has also been moving into shipping-related activities, particularly container management, freight forwarding, ship agency, customs agency and ship management services in an effort to broaden its revenue base and provide a more integrated transport service.

Shipbuilding

In the early 1980s the Australian shipbuilding industry was highly protected with bounty rates of up to 27.5 per cent payable on costs of construction. The industry sought principally to maintain its domestic market against highly competitive overseas builders by producing a broad range of vessels which met most of Australia's needs.

In 1984, a major restructuring program was introduced by the Commonwealth Government. Not one Australian built ship of bountiable size was exported in that year.

The restructuring program placed emphasis on the development of a more efficient and export oriented industry assisted by a registration process and monitoring of the industry developments by the Shipbuilding Consultative Group.

At the present time, the newly developing Australian shipbuilding industry has grown to the extent that vessels intended for export markets under construction and on order, account for more than half the vessels produced. The value of these orders exceeded $600 million at 30 June 1989.

There have been some notable marketing successes in international markets which are due to shipbuilders implementing improved and innovative management, innovative designs, high quality production techniques, new materials and effective marketing against strong international competition.

The use of reinforced plastic fibre in ship interiors and the application of aluminium in the production of hulls has often made Australian vessels technically superior.

The industry has successfully entered a number of niche markets for luxury motor yachts, specialised fishing vessels and high-speed catamarans.

Assistance to the industry was reviewed by the then Industries Assistance Commission in their report of 29 June 1988. On the basis of this review and the success of the restructuring plan, the Government decided to continue bounty assistance for a further six years, but with revised registration criteria for shipbuilders and with a phasing down in bounty rates until June 1995, when bounty assistance will cease.

The *Bounty (Ships) Act 1989* provides for assistance to shipbuilders from 1 July 1989 to 30 June 1995. Bounties paid to shipbuilders will be reduced from the current level of 15 per cent to 10 per cent on 1 July 1991, to five per cent on 1 July 1993 and to nil on 1 July 1995.

As at 30 June 1990, there were 15 shipbuilders registered for bounty purposes under the new arrangements. The overall level of activity in the commercial sector remained strong in 1989–90 with continued strong export performance. There was further restructuring in the industry during 1989–90.

Total financial assistance to the commercial shipbuilding industry in 1989–90 amounted to $45 million (compared to $45 million in 1988–89 and $37.2 million in 1987–88).

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 for 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 coordinating committee, comprising representatives of the employers and the Waterside Workers' Federation (WWF), 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 Coordinating Committees set up in the major ports.

Under section 168 of the *Industrial Relations Act 1988*, a Port Conciliator Service was established to assist parties to an industrial award to implement the procedures of that award for the prevention or settling of disputes.

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 part VI, division 9, of the *Industrial Relations Act 1988*.

As part of a general reform program, the Government has agreed to provide financial assistance toward the cost of a redundancy scheme as a means of rejuvenating the waterfront workforce. Legislation will be amended to allow industry levies to be devoted to this purpose.

The Stevedoring Industry Finance Committee will be responsible for the disbursement of funds collected through statutory levies for the redundancy scheme.

Waterfront reform

In June 1989 the Government outlined a comprehensive plan for reform of Australia's waterfront.

The Government broadly accepted the findings of the Inter-State Commission (ISC) Waterfront Report which was released in 1989 following more than two years of intensive investigations into the means of improving the waterfront's efficiency, productivity, reliability and industrial relations record.

Reforms are being made in three major areas:

(a) The reform of the stevedoring and container depot industries is proceeding in accordance with the provisions of an In-Principle Agreement negotiated between the Commonwealth Government, the ACTU, stevedoring unions and employers. Major changes flowing from the Agreement are being implemented over a three year period and include:

- introduction of enterprise employment at major ports;
- a one-off special retirement/redundancy package for 3,000 employees and a recruitment program for 1,000 new entrants over the period of the reform process to rejuvenate the workforce;
- Government funding of up to $154 million towards redundancy payments, training, skills audits and job redesign projects. The matching employer contribution towards redundancy costs is being met through statutory man-hour and cargo levies;
- award restructuring for the development of skills related career paths and a greater emphasis on training;
- introduction of arrangements for a supplementary workforce to meet fluctuating labour demands on a daily hire basis; and
- phasing out of cross-subsidisation of stevedoring labour costs in small ports under present statutory levy arrangements.

The Waterfront Industry Reform Authority (WIRA) has responsibility for oversighting the implementation of the In-Principle Agreement, monitoring and reporting to Government every six months on progress in the introduction of the new arrangements and the disbursal of restructuring assistance. The current statutory provisions relating to the stevedoring industry are contained in the *Stevedoring Industry Levy Act 1977*, the *Stevedoring Industry Levy Collection Act 1977*, the *Stevedoring Industry Finance Committee Act 1977*, the *Port Statistics Act 1977* and Part VI, Division 9, of the *Industrial Relations Act 1988*.

(b) Port authority reforms. A meeting with State and Northern Territory government ministers was held on 11 August 1989 at which the States endorsed the Commonwealth Government's approach and undertook to pursue reform of port authority operations consistent with the ISC's recommendations. Following a meeting of the Australian Transport Advisory Council on 25 May 1990 the States and the Northern Territory committed themselves to public accountability by progressing their reforms through the release of reform timetables and regular reporting, including performance indicators. Ways in which port authorities might act to improve port services in a competitive environment are also being examined.

(c) Ensuring a more competitive commercial environment on the waterfront. Additional resources have been allocated to the Trade Practices Commission to enable it to effectively apply the Trade Practices Act to the waterfront industry, including the scrutiny of uncompetitive practices in the container depot industry. The Prices Surveillance Authority (PSA) has been directed to review pricing practices in the stevedoring industry and to develop a monitoring system to ensure the benefits of reform are passed on to users.

Shipping reform

In June 1989, the Government announced a three year shipping reform strategy, based on the recommendations of the Shipping Reform Task Force (SRTF) which provides a blueprint for improving the efficiency and competitiveness of Australian shipping into the nineties.

The main elements of the strategy are:

- reductions in the crew sizes of new and existing ships which will see a reduction in the workforce of some 20 per cent (about 1,000) by 1992;
- extension until mid-1997 of the present fiscal regime of capital grants and accelerated depreciation to encourage the introduction of new and efficient ships;
- expansion until mid-1992 of the capital grants scheme to cover the cost of modifying existing ships for operation with smaller crews;
- a voluntary early retirement scheme for seafarers affected by recrewing;
- expansion of training and retraining programs for the seagoing workforce aimed at broadening skills through the concept of multi-skilling; and
- development of more flexible guidelines (including permits for continuous trading) for the permit system which allows unlicensed ships to carry coastal cargoes when suitable licensed ships are unavailable.

The Shipping Industry Reform Authority (SIRA) was established for three years to oversee the detailed development and implementation of the strategy.

During the first quarter of 1990, recrewing led to a reduction of 290 ratings on existing ships. A further reduction of 180 ratings is expected to occur in 1990–91 and, by mid-1992, about 170 officers will leave the industry as radio officer and electrical officer job categories are phased out. By mid-1992, once this recrewing program has been completed and new ships currently on order have been introduced with low crews, the average crew on an Australian ship will be 21, in line with the average crew on the ships of other OECD nations. This compares with an average crew of 29 at the end of 1988, prior to the commencement of the shipping reform program.

To see that the benefits of reform are passed on to users, the PSA is to monitor coastal freight rates.

New guidelines allowing greater flexibility in the issue of single voyage coastal trade permits and the reintroduction of continuing voyage permits took effect from 1 March 1990.

Towage reform

The Government's towage reform program was introduced in December 1989 and primarily focuses on reducing labour costs, a major cost factor within the industry, through a review of work practices and the numbers of personnel required to operate Australian tugs.

The main elements of the program are:

- reductions in harbour tug crews to five in early 1990;
- further reductions to a maximum crew of four by mid-1992;
- a major review of work practices in ports, including roster arrangements, leading to further reductions in the number of tug crews required at individual ports; and
- voluntary early retirement and associated training schemes for those affected by reform.

The first phase of crew reductions to five is largely completed with 73 crew having left the industry under voluntary early retirement.

The Port Practices Review had by mid-1990, identified a wide range of changes to work practices in individual ports (including increased flexibility of rostering and leave arrangements, more effective tug deployment, and reduced reliance on casual labour for relief purposes) which would allow the removal of 41 jobs from the industry. These changes will improve industry service and reduce costs.

The next phase in the reform program, the move to a maximum crew of four on harbour tugs, is dependant on the introduction of training schemes and/or the introduction of new tugs, with all new tugs to be crewed at four when they are introduced. Although the precise timing of further reductions on existing tugs is not yet finalised, the progressive implementation of this element of the reform program is expected to commence by mid-1991.

The PSA is conducting an inquiry into towage charges to ensure that users benefit from towage reform through reduced charges.

In addition to these operational changes, ways are also being sought, in cooperation with State Governments, to increase competitive influences on the industry to further improve efficiency.

The Trade Practices Commission (TPC) is also reviewing past authorisation of agreements that limit competition in harbour towage services in the ports of Sydney, Melbourne, Botany Bay and Newcastle.

Tasmanian Freight Equalisation Scheme

The Tasmanian Freight Equalisation Scheme was first introduced in July 1976 following the Nimmo Commission of Inquiry into transport to and from Tasmania. It was revised in 1985 following the Government's consideration of the Inter-State Commission's March 1985 report.

The Scheme is designed to alleviate the comparative freight cost disadvantage of shipping certain non-bulk goods by sea between Tasmania and the mainland. Responsibility for administration of the Scheme lies within the Transport and Communications portfolio.

The northbound component of the Scheme covers eligible goods produced or manufactured in Tasmania for use or sale on the mainland. The southbound component covers eligible non-consumer raw materials, machinery and equipment for use in manufacturing, mining, agriculture, forestry and fishing industries in Tasmania. In 1989–90, $31.7 million in assistance was paid on the northbound component and $4.8 million on the southbound component.

Trade Practices Act

Part X of the Trade Practices Act (as amended by the *Trade Practices (International Liner Cargo Shipping) Amendment Act 1989*) provides a regulatory framework for Australia's international liner trades and encourages a more competitive shipping environment for the benefit of Australian exporters. Under the amended legislation, shipping conferences (cartels) now receive only limited exemption from the Act's competition provisions for registered agreements.

The new law seeks to:

- ensure that Australian exporters have continued access to outwards liner cargo shipping services of adequate frequency and reliability at freight rates that are internationally competitive;
- promote conditions in the international liner cargo shipping industry that encourages stable access to export markets for exporters in all States and Territories; and
- ensure that efficient Australian flag shipping is not unreasonably hindered from normal participation in any outwards liner cargo shipping trade.

The creation of a more competitive liner shipping environment is being encouraged by the introduction of a number of important mechanisms. Exemption from the restrictive trade practice provisions of the Trade Practices Act is limited to conduct by conference shipping services which is of benefit to Australian exporters. Appropriate pro-competitive provisions of the Trade Practices Act are applied to ocean carriers, including section 46 which prohibits misuse of market power and a provision based on section 49 which prohibits discrimination between like placed shippers.

There is also a requirement for conference agreements to be publicly available and to comply with minimum standards, and for conferences to take part in negotiations with a designated shipper body over minimum service levels, freight rates and service arrangements.

The Trade Practices Commission and the Trade Practices Tribunal have investigating and reporting powers in relation to conference agreements, non-conference ocean carriers with a substantial degree of market power and unfair pricing practices.

Sea Carriage of Goods Act

The *Sea Carriage of Goods Act 1924*, provides for regulation of carriers' responsibilities and liabilities in sea borne trades. The Act is based on an international convention known as the Hague Rules which came into effect in 1924.

The Hague Rules, and consequently the Act, have become technically deficient in a number of areas and in June 1988, the Government announced it would amend the Act to take into account international trends in marine cargo liability regulation. Australia will formally adopt and implement the Visby and SDR Protocols to the Hague Rules. This will bring Australian legislation into line with practices in the major European countries. The amended Act will also provide a mechanism for the future implementation of the Hamburg Rules, a United Nations Convention on the Carriage of Goods by Sea, when these Rules have gained wider international acceptance and represent a viable alternative for Australia.

Marine pollution

The *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*, the *Navigation (Protection of the Sea) Amendment Act 1983*, 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) Act 1981* and the *Protection of the Sea (Shipping Levy Collection) Act 1981* currently provide the Commonwealth with the power to deal with matters relating to marine 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, make 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.

Shipping and Air Cargo Commodity Statistics

Source of data

Shipping and Air Cargo Commodity Statistics (SACCS) are compiled from information contained in import and export documents submitted by importers and exporters or their agents to the Australian Customs Service (ACS).

Data are augmented with information from Lloyd's Register of Shipping to enable classification by selected shipping characteristics such as ship type and country of registration.

The scope of the statistics

Inward commodity statistics relate to cargo loaded overseas, discharged from ships and aircraft at Australian ports and for which Customs' import documents have been received by the ABS.

Similarly, outward commodity statistics relate to cargo loaded on ships and aircraft at Australian ports for discharge at overseas ports and for which Customs' export documents have been received by the ABS.

The commodity statistics include cargo shipped by sea and air and include Australian produce and re-exports of foreign produce.

Ship movement statistics relate to visits made to Australian ports by ships engaged in overseas voyages.

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 and air). It is a four level classification based on the third revision of the United Nations' Standard International Trade Classification (SITC Rev. 3).

Time of recording

SACCS data are compiled according to the date of arrival or departure of the ship or aircraft concerned at Australian ports. SACCS data are therefore not directly comparable to foreign trade statistics which are compiled according to the month in which relevant documents are finalised by the ACS and passed to the ABS for further processing.

Valuation

The recorded value of inward cargo is the free on board (FOB) Customs value. The value of outward cargo is the FOB transactions value of the goods expressed in Australian dollars.

Unit of quantity

SACCS data record commodity movements in gross weight tonnes which is the total weight of cargo, irrespective of the basis on which freight is charged. It includes the weight of moisture content, wrappings, crates, boxes, and containers (other than standard international containers used for containerised cargo).

Statistics are also included on deadweight tonnage which is the displacement of a fully loaded ship, less the weight of the ship itself.

Ship type

All ships are classified from Lloyd's Register of Shipping according to one of 11 ship types in terms of their structure or design. These 11 ship types are amalgamated into four categories as follows:

Category	*Ship types*
General cargo ships	Container ships
	Conventional cargo ships
	Roll-on/Roll-off ships
	Multi-purpose ships
Tankers	Gas carriers
	Liquid tankers
Bulk carriers	Dry bulk carriers
	Dry/wet bulk carriers
Other ships	Passenger ships
	Livestock carriers
	Other ships

Ship characteristics

Ships are also classified according to the type of service they provide. The two types of service for which statistics are shown are:

- *Liner service* which relates specifically to a ship operated by a carrier providing services on a specified route on a relatively regular basis; and
- *Other service* which refers to all ships operating on other than a liner service.

Liner service is further broken down into conference and non-conference. A *conference* is an association of ship owners which regulate the freight rates and terms and conditions of carriage of goods in any particular trade. Conference agreements exist only in respect of liner services and normally include provisions for sharing the trade, rationalising sailing schedules, and pooling arrangements for resources and/or revenue.

The ABS completes periodic analysis of the type of service on which a vessel has been engaged. These details are used in this publication to classify vessel data by type of service. For vessels calling infrequently, or for those frequently changing the type of service under which they operate, the service status may not be appropriate to the current period data.

Ship calls refers to the number of port visits made to Australian ports by ships engaged in overseas voyages.

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.

Geographic terms

For inward cargo, the port of loading is the overseas port at which the cargo is loaded onto the ship or aircraft. This port is not necessarily in the country of origin of the cargo. The port of discharge is the Australian port at which the cargo is unloaded from the ship or aircraft.

For outward cargo, the port of loading is the Australian port at which the cargo is loaded onto the ship or aircraft. The port of loading is not necessarily in the State of origin of the cargo. The port of discharge is the overseas port at which the cargo is unloaded from the ship or aircraft. The port of discharge is not necessarily in the country of final destination as the cargo may be subsequently trans-shipped.

The State of origin is defined as the State in which the final stage of production or manufacture occurred.

Australian Trading Ships

SUMMARY OF THE AUSTRALIAN TRADING FLEET OF SHIPS 150 GROSS TONNES OR MORE, 30 JUNE 1989
(*Source*: Department of Transport and Communications)

Ships	*Number*	*DWT*	*Gross tonnes*
Major Australian fleet*(a)*			
Coastal—			
Australian owned and registered	32	1,268,313	881,986
Australian owned, overseas registered	1	35,244	20,570
Overseas owned, Australian registered	7	78,725	54,492
Overseas owned and registered	3	17,056	10,303
Coastal fleet	*43*	*1,399,338*	*967,351*
Overseas—			
Australian owned and registered	18	1,600,785	964,627
Australian owned, overseas registered	1	41,151	29,223
Overseas owned, Australian registered	13	609,433	458,185
Overseas owned and registered	1	2,925	2,610
Overseas fleet	*33*	*2,254,294*	*1,454,645*
Major Australian fleet	*76*	*3,653,632*	*2,421,996*
Other trading ships			
Australian owned and registered	18	9,868	10,848
Australian trading fleet	**94**	**3,663,500**	**2,432,844**

(a) 2,000 DWT and over.

The above table shows particulars of all Australian trading ships of 150 gross tonnes or more engaged in the regular overseas, interstate or intrastate services at 30 June 1989.

Ships registered in Australia

The following table shows the number of ships registered in Australia at 30 June 1990.

SHIPS REGISTERED IN AUSTRALIA AT 30 JUNE 1990
(*Source*: Department of Transport and Communications)

	Nature of registration					
Location	*Demise chartered(a)*	*Other(b)*	*Government*	*Fishing*	*Pleasure*	*Total*
New South Wales	6	239	3	272	1,357	1,877
Victoria	4	104	5	177	453	743
Queensland	5	284	28	628	944	1,889
Western Australia	5	126	3	382	427	943
South Australia	—	40	3	262	210	515
Tasmania	—	56	4	214	170	444
Northern Territory	2	18	1	56	159	236
Total	**22**	**867**	**47**	**1,991**	**3,720**	**6,647**

(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. *(b)* Relates to vessels used for commercial purposes.

Overseas Shipping

Ship movements into and out of Australia

The following table shows particulars of overseas shipping which arrived at or departed from Australian ports according to the country of registration of the ships.

OVERSEAS SHIPPING: SHIP ARRIVALS AND DEPARTURES BY COUNTRY OF SHIP REGISTRATION, 1988–89

	Ship Arrivals		*Ship Departures*	
Country of registration	*Ship calls*	*DWT ('000 tonnes)*	*Ship calls*	*DWT ('000 tonnes)*
Australia	633	30,767	604	28,440
China	418	15,966	433	16,368
Denmark	24	344	21	310
Germany, Federal Republic of	305	5,097	304	5,111
Greece	594	26,388	588	26,291
Hong Kong	391	18,096	372	17,491
India	121	4,820	122	4,848
Japan	1,233	94,240	1,211	91,980
Korea, Republic of	313	21,537	296	20,438
Liberia	829	36,404	831	35,502
Malaysia	260	5,187	244	4,925
Netherlands	183	2,712	187	2,799
New Zealand	224	3,874	228	3,935
Norway	48	1,263	51	1,396
Panama	1,898	46,595	1,900	46,448
Philippines	840	30,269	836	31,259
Singapore	465	16,663	458	16,618
Sweden	39	1,793	41	1,827
Taiwan	223	17,818	229	18,384
United Kingdom	440	13,920	424	13,565
United States of America	10	152	11	255
USSR	360	5,328	358	5,328
Other countries	1,980	55,929	1,978	54,612
Total all countries	**11,831**	**455,162**	**11,727**	**448,130**

Shipping at principal ports

The following table shows the movement of overseas shipping and cargo at Australian ports during 1988–89. It provides details of the ships calling at Australian ports and the gross weight of cargo loaded and discharged.

OVERSEAS SHIP AND CARGO MOVEMENTS AT AUSTRALIAN PORTS, 1988–89

	Ship Arrivals		*Cargo discharged*	*Ship Departures*		*Cargo loaded*
Australian port	*Ship calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*	*Ship calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*
New South Wales—						
Sydney	1,115	23,251	6,363	1,060	22,118	4,258
Botany Bay	572	12,218	50	550	9,285	270
Newcastle	713	41,159	1,631	719	41,193	30,846
Port Kembla	280	17,524	1,028	279	17,384	9,725
Other	95	2,968	1,903	95	5,429	1,019
Total	*2,775*	*97,120*	*10,975*	*2,703*	*95,409*	*46,118*
Victoria—						
Melbourne	1,388	27,183	5,049	1,431	28,242	3,653
Geelong	254	8,120	2,308	258	7,995	1,753
Other	231	7,939	485	222	7,776	3,415
Total	*1,873*	*43,242*	*7,842*	*1,911*	*44,013*	*8,821*

OVERSEAS SHIP AND CARGO MOVEMENTS AT AUSTRALIAN PORTS, 1988–89—*continued*

	Ship Arrivals		Cargo discharged	Ship Departures		Cargo loaded
Australian port	*Ship calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*	*Ship calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*
Queensland—						
Brisbane	1,195	26,005	2,262	1,178	25,568	6,160
Cairns	106	1,105	91	103	1,026	540
Townsville	344	4,757	533	336	4,471	1,703
Other	1,290	83,720	660	1,260	82,588	64,322
Total	*2,935*	*115,587*	*3,546*	*2,877*	*113,653*	*72,725*
South Australia—						
Port Adelaide	421	8,997	742	410	8,731	1,449
Port Pirie	45	1,005	28	51	1,143	634
Other	243	9,051	1,719	237	8,754	3,192
Total	*709*	*19,053*	*2,489*	*698*	*18,628*	*5,275*
Western Australia—						
Fremantle	1,123	29,903	1,258	1,122	29,304	8,360
Port Hedland	367	38,260	135	357	36,020	32,514
Other	1,184	86,477	5,358	1,210	87,443	80,569
Total	*2,674*	*154,640*	*6,751*	*2,689*	*152,767*	*121,443*
Tasmania—						
Hobart	131	2,810	121	135	2,560	238
Launceston	160	5,118	110	150	4,973	2,835
Burnie	136	2,858	95	136	2,822	371
Other	94	5,009	54	85	3,788	2,839
Total	*521*	*15,795*	*380*	*506*	*14,143*	*6,283*
Northern Territory—						
Darwin	173	2,526	296	171	2,472	1,475
Other	171	7,199	875	172	7,045	5,142
Total	*344*	*9,725*	*1,171*	*343*	*9,517*	*6,617*
Total Australia	**11,831**	**455,162**	**33,155**	**11,727**	**448,130**	**267,284**

Overseas cargo according to trade area and ship type

The following two tables show details of cargo discharged in Australia from overseas, and cargo loaded in Australia for discharge overseas, classified according to the various trade areas of the world and by ship type.

INWARD OVERSEAS SEA CARGO BY TRADE AREA OF PORT OF LOADING BY SHIP TYPE, 1988–89
('000 tonnes)

Trade area	*General cargo*	*Tanker*	*Bulk carrier*	*Other ships*	*Total ships*
Europe—Atlantic	1,316	317	459	13	2,105
Europe—Baltic—Western	223	5	37	—	265
Europe—Baltic—Eastern	25	49	—	—	74
Europe—Mediterranean—Western	561	105	97	3	767
Europe—Mediterranean—Eastern	55	—	—	—	55
East Asia	1,016	139	215	4	1,373
Japan and North Asia	1,204	157	1,752	7	3,119
North America—West Coast	938	276	2,361	29	3,604
North America—East Coast	774	739	1,180	44	2,737
Central America and Caribbean	35	8	46	—	88
South America—West Coast	31	—	24	67	122
South America—East Coast	281	46	292	1	621
Africa—Mediterranean	1	—	—	—	1
West Africa	1	—	528	—	529
South and East Africa	120	—	14	1	136
Red Sea and Mediterranean Middle East	68	214	175	—	456

INWARD OVERSEAS SEA CARGO BY TRADE AREA OF PORT OF LOADING BY SHIP TYPE, 1988–89—*continued*
('000 tonnes)

Trade area	*General cargo*	*Tanker*	*Bulk carrier*	*Other ships*	*Total ships*
Middle East Gulf	128	6,925	393	72	7,518
West India	72	—	354	2	428
East India	97	—	17	2	116
South East Asia	1,229	3,780	715	190	5,913
New Zealand	512	614	557	75	1,757
Papua New Guinea and Solomon Islands	49	54	23	4	130
Pacific Islands and other countries	72	—	1,090	6	1,168
Trade area not available	45	1	27	—	72
Total inward overseas cargo	**8,852**	**13,428**	**10,356**	**517**	**33,155**

OUTWARD OVERSEAS SEA CARGO BY TRADE AREA OF PORT OF DISCHARGE BY SHIP TYPE, 1988–89
('000 tonnes)

Trade area	*General cargo*	*Tanker*	*Bulk carrier*	*Other ships*	*Total ships*
Europe—Atlantic	725	148	30,589	4	31,466
Europe—Baltic—Western	20	21	978	66	1,085
Europe—Baltic—Eastern	285	—	629	—	914
Europe—Mediterranean—Western	443	10	6,230	—	6,683
Europe—Mediterranean—Eastern	85	—	3,211	—	3,296
East Asia	1,593	846	29,263	34	31,736
Japan and North Asia	5,185	1,937	132,200	441	139,763
North America—West Coast	550	1,496	4,241	1	6,288
North America—East Coast	335	480	5,359	—	6,174
Central America and Caribbean	21	23	47	—	91
South America—West Coast	60	9	431	—	500
South America—East Coast	15	—	1,942	—	1,957
Africa—Mediterranean	154	54	2,258	—	2,466
West Africa	33	—	630	—	663
South and East Africa	70	79	154	4	307
Red Sea and Mediterranean Middle East	141	—	1,932	—	2,073
Middle East Gulf	461	56	3,680	—	4,197
West India	225	28	4,950	—	5,203
East India	170	80	1,213	—	1,463
South East Asia	1,692	1,047	4,398	30	7,167
New Zealand	403	527	1,049	—	1,979
Papua New Guinea and Solomon Islands	392	413	1,002	8	1,815
Pacific Islands and other countries	253	653	220	1	1,127
Trade area not available	628	—	8,018	225	8,871
Total outward overseas cargo	**13,939**	**7,907**	**244,624**	**814**	**267,284**

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 SEA CARGO: BY COMMODITY, 1988–89
($ million)

ATFCC Division	*Title*	*Inward cargo*	*Outward cargo*
00	Live animals	17	252
01	Meat and meat preparations	16	2,126
02	Dairy products and birds' eggs	88	584
03	Fish, crustaceans, molluscs and aquatic invertebrates	405	522
04	Cereals and cereal preparations*(a)*	70	2,797
05	Vegetables and fruit	357	478
06	Sugar, sugar preparations and honey	43	924
07	Coffee, tea, cocoa, spices and manufactures thereof*(a)*	283	33
08	Feeding stuff for animals	75	252
09	Miscellaneous edible products and preparations	236	130
11	Beverages*(a)*	279	160
12	Tobacco and tobacco manufactures*(b)*	90	18
21	Hides, skins and furskins*(a)*	9	361
22	Oil seeds and oleaginous fruits*(b)*	48	70
23	Crude rubber*(a)(b)*	109	9
24	Cork and wood*(a)*	564	17
25	Pulp and waste paper	225	35
26	Textile fibres and their wastes*(a)*	174	6,048
27	Fertilisers and minerals, crude*(a)*	272	168
28	Metalliferous ores and metal scrap*(a)*	73	2,729
29	Crude animal and vegetable materials, n.e.s.*(a)(b)*	75	99
32	Coal, coke and briquettes*(a)*	9	3,479
33	Petroleum, petroleum products and related materials*(a)*	1,914	1,097
34	Gases, natural and manufactured*(a)(b)*	4	—
41	Animals oils and fats*(a)*	2	22
42	Fixed vegetable oils and fats, crude, refined or fractionated*(a)(b)*	100	10
43	Animal and vegetable fats and oils, processed, and waxes of animal or vegetable origin*(a)(b)*	12	5
51	Organic chemicals*(a)*	853	48
52	Inorganic chemicals*(a)*	362	86
53	Dyeing, tanning and colouring materials*(a)*	197	142
54	Medicinal and pharmaceutical products	295	63
55	Essential oils, perfume materials*(a)*	224	76
56	Fertilisers, manufactured	216	8
57	Plastics in primary forms*(a)*	308	143
58	Plastics in non-primary forms*(a)*	369	24
59	Chemical materials and products*(a)*	485	131
61	Leather, leather manufactures*(b)*	73	124
62	Rubber manufactures*(a)*	515	58
63	Cork and wood manufactures*(a)*	205	9
64	Paper, paperboard and articles of paper	1,269	117
65	Textile yarn, fabrics, made-up articles, n.e.s.*(a)*	1,734	74
66	Non-metallic mineral manufactures, n.e.s.*(a)*	760	100
67	Iron and steel*(a)*	889	463
68	Non-ferrous metals*(a)*	238	3,771
69	Manufactures of metal, n.e.s.*(a)*	971	273
71	Power generating machinery and equipment	798	243
72	Machinery specialised for particular industries*(a)*	2,057	252
73	Metalworking machinery	322	23
74	General industrialised machinery and equipment*(a)*	1,874	225
75	Office machines and ADP equipment	1,047	33
76	Telecommunications and sound recording or reproducing apparatus and equipment*(a)*	991	22
77	Electrical machinery, apparatus and appliances*(a)*	1,285	148
78	Road vehicles	4,742	355
79	Other transport equipment	328	75
81	Prefabricated buildings, sanitary plumbing, heat and light fixtures and fittings*(b)*	110	24
82	Furniture and parts thereof	279	31
83	Travel goods, handbags and similar containers*(b)*	138	1
84	Articles of apparel and clothing accessories	536	11
85	Footwear	300	4

For footnotes *see* end of table.

INWARD AND OUTWARD OVERSEAS SEA CARGO: BY COMMODITY, 1988–89—continued
($ million)

ATFCC Division	*Title*	*Inward cargo*	*Outward cargo*
87	Professional, scientific and controlling apparatus*(a)*	435	29
88	Photographic apparatus, equipment and supplies*(a)*	326	89
89	Miscellaneous manufactured articles*(a)*	1,864	178
93	Special transactions and commodities not classified by kind*(b)*	28	144
96	Coins, not being legal tender*(b)*	—	—
97	Gold, non-monetary*(b)*	—	—
99	Other commodities and transactions*(c)*	2,884	7,576
Total all commodities		**35,857**	**37,597**

(a) Excludes import commodities regarded as confidential. These items are included in Division 99. *(b)* Excludes export commodities regarded as confidential. These items are included in Division 99. *(c)* Includes commodities regarded as confidential.

OVERSEAS SEA CARGO BY COMMODITY BY TYPE OF SERVICE, 1988–89
($ million)

ATFCC Section and title	*Liner Service* *Conference*	*Non-conference*	*Other*	*Total*
INWARD				
0 Food and live animals*(a)*	906	428	257	1,591
1 Beverages and tobacco	172	142	56	369
2 Crude materials, inedible, except fuels*(a)*	482	429	639	1,549
3 Mineral fuels, lubricants and related materials*(a)*	30	20	1,875	1,927
4 Animal and vegetables oils, fats and waxes*(a)*	34	12	69	115
5 Chemicals and related products*(a)*	1,483	864	962	3,309
6 Manufactured goods classified chiefly by material*(a)*	3,231	1,960	1,463	6,654
7 Machinery and transport equipment*(a)*	6,176	2,410	4,857	13,443
8 Miscellaneous manufactured articles*(a)*	2,250	1,072	666	3,988
9 Commodities and transactions*(b)*	1,185	596	1,131	2,912
Total all commodities	**15,949**	**7,936**	**11,973**	**35,857**
OUTWARD				
0 Food and live animals*(a)*	2,973	970	4,154	8,098
1 Beverages and tobacco*(a)*	84	65	29	178
2 Crude materials, inedible, except fuels*(a)*	4,198	1,668	3,669	9,536
3 Mineral fuels, lubricants and related materials*(a)*	16	19	4,541	4,576
4 Animal and vegetable oils, fats and waxes*(a)*	8	6	23	37
5 Chemicals and related products*(a)*	296	266	160	722
6 Manufactured goods, classified chiefly by material*(a)*	1,400	1,312	2,277	4,989
7 Machinery and transport equipment*(a)*	640	458	278	1,376
8 Miscellaneous manufactured articles*(a)*	179	133	54	366
9 Commodities and transactions*(b)*	1,001	484	6,234	7,720
Total all commodities	**10,795**	**5,381**	**21,420**	**37,597**

(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 shipping cargo loaded at an Australian port for discharge at another Australian port. Both interstate and intrastate 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, 1988-89
OUTWARD OVERSEAS SEA CARGO BY COMMODITY BY TYPE OF SERVICE
(*Source*: Department of Transport and Communications)
('000 Gross Weight Tonnes)

	Loaded			*Discharged*		
Australian port	*Interstate*	*Intrastate*	*Total*	*Interstate*	*Intrastate*	*Total*
New South Wales—						
Sydney	117	—	117	2,542	704	3,246
Port Kembla	1,317	20	1,337	6,089	22	6,111
Botany Bay	360	216	576	3,377	—	3,377
Other	439	1,396	1,835	2,171	906	3,077
Total	*2,233*	*1,632*	*3,865*	*14,179*	*1,632*	*15,811*
Victoria—						
Melbourne	*1,527*	*30*	*1,557*	*2,218*	*3*	*2,221*
Geelong	*1,148*	*144*	*1,292*	*340*	*32*	*372*
Westernport	*6,258*	*2*	*6,260*	*720*	—	*720*
Other	—	—	—	*596*	*141*	*737*
Total	*8,933*	*176*	*9,109*	*3,874*	*176*	*4,050*
Queensland—						
Brisbane	*756*	*1,327*	*2,083*	*5,038*	*497*	*5,535*
Gladstone	*1,528*	*497*	*2,025*	*43*	*6,768*	*6,811*
Other	*1,248*	*6,584*	*7,832*	*310*	*1,143*	*1,453*
Total	*3,532*	*8,408*	*11,940*	*5,391*	*8,408*	*13,799*
South Australia—						
Adelaide	*568*	*58*	*626*	*299*	*1,024*	*1,323*
Port Stanvac	*371*	—	*371*	*284*	*806*	*1,090*
Other	*3,249*	*2,066*	*5,315*	*1,351*	*294*	*1,645*
Total	*4,188*	*2,124*	*6,312*	*1,934*	*2,124*	*4,058*
Western Australia—						
Fremantle	*818*	*882*	*1,700*	*366*	*315*	*681*
Other	*6,304*	*385*	*6,689*	*59*	*952*	*1,011*
Total	*7,122*	*1,267*	*8,389*	*425*	*1,267*	*1,692*
Tasmania—						
Hobart	*433*	*44*	*477*	*851*	*126*	*977*
Burnie	*599*	*126*	*725*	*681*	*44*	*725*
Devonport	*476*	—	*476*	*331*	—	*331*
Launceston	*346*	*14*	*360*	*1,064*	*18*	*1,082*
Other	*750*	*19*	*769*	*124*	*15*	*139*
Total	*2,604*	*203*	*2,807*	*3,051*	*203*	*3,254*
Northern Territory—						
Darwin	*3*	*41*	*44*	*177*	*5*	*182*
Other	*417*	*5*	*422*	—	*41*	*41*
Total	*420*	*46*	*466*	*177*	*46*	*223*
Total all ports	**29,031**	**13,856**	**42,887**	**29,031**	**13,856**	**42,887**

RAILWAYS

Government Railways

The six government owned railway systems are operated by the State Rail Authority of New South Wales (SRA), 'V/Line' operated by the State Transport Authority of Victoria, Queensland Railways (QR) operated by the Queensland Department of Transport, Western Australian Government Railways Commission (WAGRC), the State Transport Authority of South Australia (STA), and the Australian National Railways Commission (ANRC).

Data contained in the following tables have been compiled from a number of sources. These sources include annual reports of the various rail authorities; data supplied by the Rail Industry Council; and data collected directly by the Australian Bureau of Statistics.

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 SYSTEM
(kilometres)

30 June	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Australian National*	*Aust.*
1984	9,884	5,929	10,231	152	5,623	7,450	39,269
1985	9,908	5,894	10,231	153	5,563	7,465	39,214
1986	9,909	5,518	10,244	153	5,553	7,333	38,710
1987	9,909	5,403	10,210	149	5,553	7,315	38,539
1988	9,917	5,289	10,089	127	5,553	7,187	38,162
1989	7,755	5,186	10,094	125	5,553	7,050	35,763

Summary of Operations

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.

GOVERNMENT RAILWAYS: SUMMARY OF OPERATION, SYSTEMS, 1988–89

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Australian National*	*Aust.*
Train-kilometres ('000)*(a)(b)*—							
Suburban passenger	32,457	13,800	6,746	n.a.	2,236	—	n.a.
Country passenger	10,940	7,225	3,646	—	1,159	2,396	25,366
Goods*(b)*	22,519	5,801	23,180	—	6,077	8,259	65,836
Total	**65,916**	**26,826**	**33,572**	**n.a.**	**9,472**	**10,655**	**n.a.**
Passenger journeys ('000)*(c)*—							
Suburban	246,087	93,500	49,418	7,023	9,396	—	405,424
Country*(d)*	3,209	5,825	1,525	—	323	350	11,232
Total	**249,296**	**99,325**	**50,943**	**7,023**	**9,719**	**350**	**416,656**
Freight—							
Tonnes carried ('000)*(d)*	50,188	9,950	80,508	—	24,294	13,821	178,761
Net tonne-kilometres (million)*(e)*	13,552	3,271	20,884	—	4,881	8,082	50,670

(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: TRAIN-KILOMETRES(a)
('000 kilometres)

Year	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Australian National*	*Aust.*
1983–84	61,659	30,702	33,303	3,697	10,333	10,238	149,932
1984–85	66,025	30,794	34,293	n.a.	11,098	11,306	n.a.
1985–86	62,237	29,809	35,116	n.a.	10,364	10,513	n.a.
1986–87	n.a.	28,399	35,051	n.a.	9,436	10,581	n.a.
1987–88	61,954	27,435	34,099	n.a.	9,465	10,680	n.a.
1988–89	61,503	26,826	33,572	n.a.	9,472	10,654	n.a.

(a) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one kilometre for revenue purpose.

GOVERNMENT RAILWAYS: FREIGHT CARRIED, NET TONNE-KILOMETRES, AND FREIGHT EARNINGS, SYSTEMS

Year	*NSW*	*Vic.*	*Qld*	*WA*	*Australian National*	*Aust.*
			FREIGHT CARRIED ('000 tonnes)			
1983–84	46,594	10,486	53,150	19,870	12,083	142,183
1984–85	47,800	11,892	65,452	22,085	12,870	160,099
1985–86	53,800	10,516	73,599	20,877	13,049	171,841
1986–87	54,747	10,597	75,169	21,264	12,900	174,677
1987–88	54,412	10,901	74,893	21,946	11,269	173,421
1988–89	50,188	9,950	80,508	24,294	13,821	178,761
			NET TONNE-KILOMETRES (million)			
1983–84	11,131	3,111	15,391	3,903	5,912	39,448
1984–85	12,393	3,543	18,438	4,328	6,270	44,972
1985–86	r13,415	3,094	20,450	4,005	7,081	48,045
1986–87	13,540	3,531	20,871	4,062	6,873	48,877
1987–88	14,212	3,351	20,676	4,203	7,165	49,607
1988–89	13,552	3,271	20,884	4,881	8,082	50,670
			FREIGHT EARNINGS ($'000)			
1983–84	559,876	160,841	669,362	180,439	192,223	1,762,741
1984–85	641,100	182,259	828,926	209,627	213,698	2,075,610
1985–86	736,795	168,641	905,494	200,974	237,345	2,249,249
1986–87	739,250	174,700	960,950	200,731	238,097	2,313,728
1987–88	767,820	176,161	910,409	204,330	236,782	2,295,502
1988–89	667,038	166,526	1,021,272	231,749	284,905	2,137,490

GOVERNMENT RAILWAYS: GROSS EARNINGS, SYSTEMS(a)
($ million)

Year	*NSW*	*Vic.(b)*	*Qld*	*SA(c)*	*WA*	*Australian National(d)*	*Aust.*
1983–84	823.1	301.7	718.0	8.1	228.3	227.1	2,306.3
1984–85	938.6	343.7	882.5	10.7	258.3	252.5	2,686.3
1985–86	1,082.4	326.7	966.0	14.6	256.0	283.3	2,929.0
1986–87	1,121.2	384.2	1,028.9	14.4	258.2	283.3	3,090.2
1987–88	*(a)*1,248.9	384.2	991.4	15.4	266.3	290.5	3,196.7
1988–89	1,114.1	n.a.	1,107.1	17.6	306.2	315.8	n.a.

(a) Excludes Commonwealth contributions and superannuation reserve. *(b)* Includes operating revenue for VLINE and fares for VLINE and MTA. *(c)* Includes urban rail operations only. *(d)* Includes Tasmania.

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 Bureau of Transport and Communications Economics (BTCE) 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 BTCE using the advised average length of haul.

TRAFFIC TASK PERFORMED BY AUSTRALIAN NON-GOVERNMENT RAILWAYS

Year	Iron ore railways	Sugar tramways	Coal railways(a)	Other non-government railways	Total(a)
		TONNES CARRIED (million)			
1982–83	78.2	20.9	7.1	8.0	114.1
1983–84	71.5	21.6	7.0	10.9	111.0
1984–85	86.9	24.0	7.9	11.1	129.9
1985–86	86.8	21.6	8.1	10.3	126.8
1986–87	91.1	23.1	7.8	11.1	133.1
1987–88	94.6	23.6	8.5	10.7	137.3
		TONNE-KILOMETRES (million)			
1982–83	24,432	355	86	171	25,045
1983–84	22,646	366	85	226	23,324
1984–85	27,649	408	98	223	28,378
1985–86	28,517	368	116	201	29,202
1986–87	29,552	393	116	220	30,281
1987–88	30,218	425	126	230	30,998

(a) Includes transfers to and from government railways.

TRAM, BUS, AND FERRY SERVICES

Trams

At 30 June 1989, 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 during 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 capital cities and Newcastle, New South Wales; Rockhampton, Queensland; Launceston and Burnie, Tasmania; 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.

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

Since 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, 1988–89

	NSW	*Vic.(a)*	*Qld*	*SA*	*WA(b)*	*Tas.*	*NT*	*ACT*	*Aust.*
Route-kilometres at 30 June									
Tram (kilometres)	..	340	..	11	..	..	..	..	351
Bus (kilometres)	1,237	3,175	831	1,020	7,608	500	626	1,220	16,217
Vehicle-kilometres									
Tram ('000)	..	24,220	..	751	..	..	..	..	24,971
Bus ('000)	68,650	37,990	29,955	37,753	49,651	9,689	2,629	18,038	254,355
Rolling stock at 30 June									
Tram (number)	..	630	..	21	..	..	..	..	651
Bus (number)	1,564	1,396	620	701	922	255	46	446	5,950
Passenger journeys									
Tram ('000)	..	118,900	..	2,544	..	..	..	..	121,444
Bus ('000)	199,341	93,000	48,926	58,456	54,981	12,783	2,889	24,100	494,476
Gross revenue*(c)*									
Tram and bus ($'000)	223,510	96,700	46,205	53,757	68,449	9,023	2,281	20,730	520,655
Working expenses*(d)*									
Tram and bus ($'000)	301,346	264,500	77,728	126,000	n.a.	24,575	6,758	38,997	n.a.
Net revenue									
Tram and bus ($'000)	−77,836	−167,800	−31,523	−72,243	n.a.	−15,552	−4,477	−18,267	n.a.
Employees at 30 June									
Tram and bus (number)	5,995	n.a.	1,597	*n.a.*	2,164	547	104	1,071	n.a.

(a) Metropolitan area only. *(b)* Excludes operations of Eastern Goldfields Transport Board. *(c)* Excludes government grants. *(d)* Includes provision of reserves for depreciation, etc. where possible.

TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL

	1983–84	*1984–85(a)*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Route-kilometres at 30 June						
Tram (kilometres)	n.a.	340	340	343	343	351
Bus (kilometres)	n.a.	n.a.	n.a.	n.a.	n.a.	16,217
Vehicle kilometres						
Tram ('000)	n.a.	24,747	24,778	24,863	24,621	24,971
Bus ('000)	n.a.	252,038	255,753	266,516	*(b)*214,687	*(b)*254,355
Rolling stock at 30 June						
Tram (number)	n.a.	683	663	648	641	651
Bus (number)	n.a.	5,942	5,918	5,939	5,962	5,950
Passenger journeys						
Tram ('000)	n.a.	112,071	115,111	115,758	117,876	121,444
Bus ('000)	n.a.	454,460	460,281	463,670	*(b)*387,601	*(b)*494,476

(a) Excludes operations of Eastern Goldfields Transport Board in Western Australia. *(b)* Excludes details of metropolitan tram and bus services in South Australia.

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

The triennial Survey of Motor Vehicle Usage (SMVU) is undertaken by the ABS in response to a wide range of users' needs to monitor the details for motor vehicle usage within Australia. Details obtained determine the total distance travelled by vehicles classified according to area of operations and purpose of travel. Information is also obtained on tonne-kilometres, average load carried, vehicle usage (i.e. business or private), fuel consumption, driver characteristics, bus passengers carried and other important variables.

The statistics are used for many decisions regarding the monitoring, planning and policy issues that affect all Australian motorists.

The 1988 SMVU consisted of some 67,000 vehicles (including for the first time since 1979 details pertaining to buses) selected from State/Territory motor registry files. Final results from this survey were released in April 1990.

The following table, taken from the 1988 SMVU publication, shows that motor vehicles in Australia travelled a total of 153,915 million kilometres. Cars and station wagons travelled 116,640 million kilometres. Of this 21 per cent was for business purposes, a further 26 per cent for travel to and from work and 53 per cent for private purposes. Rigid trucks travelled a total of 7,840 million kilometres, while articulated trucks travelled 3,836 million kilometres in total.

The standard errors (SE %) indicate the extent to which the estimates can vary by chance because only a sample and not the total vehicle population was enumerated.

TOTAL ANNUAL KILOMETRES BY VEHICLE TYPE AND PURPOSE OF TRAVEL AUSTRALIA, TWELVE MONTHS ENDED 30 SEPTEMBER 1988

	Laden business		*Unladen business*		*Total business(a)*		*To and from work paid and unpaid*		*Private*		*Total*	
Type of vehicle	*Million kilometres*	*SE %*	*Million kilometres*	*SE %*	*Million kilometres*	*SE %*	*Million kilometres*	*SE %*	*Million kilometres*	*SE %*	*Million kilometres*	*SE %*
Cars and station wagons	..	..	..	..	24,761.9	2	29,743.4	2	62,134.5	1	116,639.8	1
Motor cycles	..	..	..	..	195.2	10	696.5	4	1,032.3	5	1,924.0	3
Utilities and panel vans	9,834.0	3	3,284.7	4	13,333.6	3	3,470.9	4	5,177.1	4	21,981.6	2
Rigid trucks	5,441.5	2	1,857.6	3	7,299.1	2	280.6	7	260.3	8	7,839.9	2
Articulated trucks	2,892.4	1	932.2	1	3,824.6	1	10.0	8	1.2	15	3,835.7	1
Non freight-carrying trucks	..	..	..	..	237.1	5	13.9	69	10.1	48	261.1	7
Buses	..	..	..	..	1,409.2	3	7.7	18	15.9	28	1,432.8	3
Total	**18,167.9**	**2**	**6,074.5**	**3**	**51,060.5**	**1**	**34,223.0**	**2**	**68,631.4**	**1**	**153,914.9**	**1**

(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.

The following table relates the State or Territory of vehicle registrations to the area vehicles actually operated in. For vehicles registered in New South Wales, 86 per cent of the tonne-kilometres travelled were within the State, whereas for the Australian Capital Territory, 62 per cent was for interstate travel.

TOTAL ANNUAL TONNE-KILOMETRES(a) BY AREA OF OPERATION: STATE/TERRITORY OF REGISTRATION, TWELVE MONTHS ENDED 30 SEPTEMBER 1988

	Area of operation											
	Capital city(b)		*Provincial urban*		*Other areas of State or Territory*		*Total within State of registration*		*Interstate*		*Australia*	
State of registration	*Million tonne-km*	*SE %*	*Million tonne-km*	*SE %*	*Million tonne-km*	*SE %*	*Million tonne-km*	*SE %*	*Million tonne-km*	*SE %*	*Million tonne-km*	*SE %*
New South Wales	7,741.4	5	3,194.9	4	10,546.9	2	21,483.2	3	3,443.7	3	24,926.9	2
Victoria	6,927.9	4	1,677.1	7	8,089.4	4	16,694.5	2	6,190.3	4	22,884.8	2
Queensland	2,797.7	3	2,631.3	4	4,750.7	3	10,179.7	2	3,154.0	4	13,333.8	2
South Australia	1,631.4	5	..	..	3,725.4	5	5,356.8	3	3,056.3	5	8,413.0	3
Western Australia	2,504.7	4	..	..	7,120.9	8	9,625.7	6	536.4	13	10,162.1	6
Tasmania	490.1	10	914.1	6	1,078.3	8	2,482.5	4	40.4	44	2,522.8	4
Northern Territory	262.6	21	..	..	1,727.9	7	1,990.5	6	696.6	15	2,687.0	6
Australian Capital Territory	226.0	7	..	..	..	..	226.0	7	372.3	6	598.3	5
Australia	**22,581.9**	**2**	**8,417.4**	**3**	**37,039.6**	**2**	**68,038.8**	**1**	**17,490.1**	**2**	**85,528.8**	**1**

(a) Total annual tonne-kilometres is the product of reported average load and total business kilometres travelled while laden, for each vehicle. *(b)* Includes all of ACT for ACT registered vehicles.

Motor vehicles on register

Censuses of motor vehicles have been conducted in respect of 31 December 1955 and 1962, and 30 September 1971, 1976, 1979, 1982, 1985 and 1988. At these census dates, considerably more information concerning the particulars shown in the tables following is available. Summary details of motor vehicles on the register are compiled as at 30 June each year from information made available by the various motor vehicle registration authorities in the States and Territories. Figures from the censuses differ from the corresponding year's figures compiled for the annual vehicles on register series. These inconsistencies result from different dates of recording and because, for some States and Territories, the annual figures include vehicles where the registration has lapsed but the details have not been removed from the register, whereas the census excludes such vehicles.

MOTOR VEHICLE CENSUS: 30 SEPTEMBER 1988
('000)

			Trucks					
State or Territory	*Motor cars and station wagons*	*Utilities and panel vans*	*Rigid*	*Articu-lated*	*Non-freight-carrying*	*Buses*	*Motor cycles*	*Total (a)*
New South Wales	2,258.7	390.0	171.8	14.9	14.2	54.1	89.9	2,993.6
Victoria	2,042.8	196.0	205.1	13.7	13.4	14.3	70.8	2,556.0
Queensland	1,131.1	297.7	53.8	8.4	5.4	10.5	60.4	1,567.2
South Australia	681.5	90.0	48.7	4.1	7.4	3.0	34.4	869.1
Western Australia	679.1	136.7	74.5	5.1	8.7	7.5	35.4	947.0
Tasmania	211.0	43.2	17.1	1.6	3.2	1.9	6.4	284.3
Northern Territory	35.7	18.2	1.7	1.0	0.3	0.7	3.1	60.7
Australian Capital Territory	118.9	11.7	3.7	0.3	0.7	1.2	3.7	140.2
Australia	**7,158.8**	**1,183.5**	**576.3**	**48.9**	**53.4**	**93.2**	**304.0**	**9,418.0**

(a) Excludes tractors, plant and equipment, caravans and trailers.

MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE, AUSTRALIA
('000)

30 June	*Motor cars and station wagons*	*Utilities, trucks, panel vans, other truck type vehicles and buses*	*Total (excludes motor cycles)*	*Motor cycles*
1984	6,636.2	1,798.4	8,434.4	398.4
1985	6,842.5	1,886.5	8,729.1	389.2
1986	6,985.4	1,930.6	8,916.0	374.5
1987	7,072.8	1,949.8	9,022.7	351.0
1988	7,243.6	1,977.6	9,221.1	323.3
1989	7,442.2	2,047.3	9,489.5	316.6

MOTOR VEHICLES(a) ON REGISTER PER 1,000 OF POPULATION
STATES AND TERRITORIES

30 June	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
1984	509.3	554.1	574.2	555.8	574.0	571.1	453.9	486.1	542.2
1985	520.7	571.1	573.7	572.0	589.4	588.0	467.4	488.8	553.9
1986	526.0	575.1	574.3	582.5	590.7	596.8	478.1	483.2	558.2
1987	522.3	581.0	562.6	575.5	582.0	598.1	459.7	497.3	555.3
1988	523.8	589.8	568.0	580.3	587.4	607.2	440.5	498.5	559.9
1989	532.7	583.3	574.9	584.9	597.0	617.0	465.8	512.3	564.6

(a) Excludes motor cycles, tractors, plant and equipment, caravans and trailers.

Drivers' and riders' licences

At 30 June 1990, the numbers of licences in force to drive motor vehicles or ride motor cycles respectively were: New South Wales—3,946,357 and 323,578; Victoria—2,725,835 and 149,454; Queensland—1,781,988 and 332,224; Western Australia—952,022 and 132,197; South Australia—908,479 and 144,198; Tasmania—281,355 (including 34,203 combined motor vehicle and motor cycle licences) and 214; Northern Territory—92,387 and 19,734; Australian Capital Territory—182,403 (including 21,205 combined motor vehicle and motor cycle, and motor cycle only licences).

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' means 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, 1988–89

State or Territory	*Motor cars and station wagons*	*Utilities*	*Panel vans*	*Trucks*		*Other truck type vehicles (a)*	*Buses*	*Total (excludes motor cycles)*	*Motor cycles*
				Rigid	*Articu-lated*				
NSW	156,467	13,357	18,296	12,561	1,259	519	4,113	206,572	6,081
Vic.	119,216	6,717	1,171	12,320	930	426	714	141,494	4,219
Qld	74,731	13,807	3,318	3,070	706	304	729	96,665	3,922
SA	31,920	2,649	1,462	2,017	277	247	164	38,736	1,364
WA	44,100	4,578	2,798	5,766	256	95	656	58,249	2,522
Tas.	10,009	1,385	471	802	103	47	98	12,915	369
NT	3,511	1,246	181	114	116	24	101	5,293	415
ACT	7,957	521	373	323	21	6	96	9,297	184
Australia	**447,911**	**44,260**	**28,070**	**36,973**	**3,668**	**1,668**	**6,671**	**569,221**	**19,076**

(a) Non-freight carrying vehicles. *(b)* From August 1983 in NSW, the body-type classification applied by the registration authority for small bus-type vehicles changed from panel vans to buses.

REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE

Year	Motor cars and station wagons	Utilities	Panel vans	Trucks: Rigid	Trucks: Articu-lated	Other truck type vehicles (a)	Buses	Total (excludes motor cycles)	Motor cycles
1983–84	461,018	46,140	(b)46,779	33,397	2,581	1,630	(b)12,169	603,714	46,684
1984–85	510,893	54,507	45,582	44,422	3,627	1,952	13,847	674,830	45,879
1985–86	476,488	46,499	33,138	39,033	4,029	2,159	10,868	612,214	35,906
1986–87	376,080	32,485	20,143	28,693	3,149	1,664	6,587	468,801	23,199
1987–88	384,204	29,820	18,295	28,592	2,812	1,602	5,495	470,820	18,532
1988–89	447,911	44,260	28,070	36,973	3,668	1,668	6,671	569,221	19,076

(a) Non-freight carrying vehicles. *(b)* From August 1983 in NSW, the body–type classification applied by the registration authority for small bus–type vehicles changed from panel vans to buses.

Road Traffic Accidents

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a) (ADMISSIONS TO HOSPITALS): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED, 1988

State or Territory	Number of accidents	Persons killed	Persons injured	Per 100,000 of mean population: Number of accidents	Persons killed	Persons injured	Per 10,000 motor vehicles registered(b): Number of accidents	Persons killed	Persons injured
NSW	7,781	1,037	8,668	136.5	18.2	152.0	25.3	3.4	28.1
Vic.	8,427	701	10,333	197.7	16.4	242.4	32.7	2.7	40.1
Qld	3,699	539	4,255	134.8	19.6	155.0	22.9	3.3	26.3
SA	2,140	223	2,590	151.9	15.8	183.9	25.3	2.6	30.6
WA	2,209	230	2,590	143.0	14.9	167.6	23.6	2.5	27.7
Tas.	595	75	649	132.7	16.7	144.7	21.4	2.7	23.3
NT	366	51	428	234.3	32.7	274.0	50.5	7.0	59.0
ACT	187	31	192	68.4	11.3	70.3	13.4	2.2	13.8
Australia	**25,404**	**2,887**	**29,705**	**153.6**	**17.5**	**179.6**	**26.6**	**3.0**	**31.1**

(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 1988.

ROAD TRAFFIC ACCIDENTS INVOLVING FATALITIES

Year	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
ACCIDENTS INVOLVING FATALITIES									
1984	910	584	448	205	203	77	45	35	2,507
1985	954	605	452	239	219	69	59	30	2,627
1986	908	610	421	259	208	78	63	30	2,577
1987	858	626	400	230	193	67	80	33	2,487
1988	912	615	483	204	199	68	46	32	2,559
1989p	783	678	376	199	213	68	57	28	2,402
PERSONS KILLED									
1984	1,037	657	505	232	220	83	50	37	2,821
1985	1,067	683	502	268	243	78	67	33	2,941
1986	1,029	668	481	288	228	91	71	32	2,888
1987	959	705	442	256	213	77	84	36	2,772
1988	1,037	701	539	222	229	75	51	32	2,886
1989p	960	771	428	219	242	80	61	34	2,795

ROADS

Summary of roads used for general traffic

Proclaimed or declared roads

The following table 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 1988. The central road authority in each State assumes responsibility under the Act for the whole or a proportion of the cost of construction and 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, labour 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 1988
(kilometres)

Class of road	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*Aust.*
State highways and freeways	10,397	7,537	10,417	—	7,949	1,919	38,219
Trunk roads		—	225	12,449	—	—	n.a.
Ordinary main roads	(*a*)25,124	14,793	8,224	—	7,460	1,259	n.a.
Total main roads	*35,521*	*22,330*	*18,866*	*12,449*	*15,409*	*3,178*	*107,753*
Secondary roads	n.a.	n.a.	6,373	—	8,645	296	n.a.
Development roads	n.a.	n.a.	8,712	—	—	45	n.a.
Tourist roads	n.a.	n.a.	—	—	—	211	n.a.
Other roads	n.a.	n.a.	—	—	—	—	n.a.
Total other roads	*n.a.*	*n.a.*	*15,085*	—	*8,645*	*552*	*n.a.*
Total	**n.a.**	**n.a.**	**33,951**	**12,449**	**24,054**	**3,730**	**n.a.**

(*a*) A combination of trunk and ordinary main 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 1989
(kilometres)

Surface of roads	*NSW(a)*	*Vic.(b)*	*Qld*	*SA*	*WA(c)*	*Tas.(d)*	*NT(e)*	*ACT*	*Aust.*
Bitumen or concrete	77,803	68,408	57,652	23,712	41,585	9,416	5,681	2,445	286,702
Gravel, crushed stone or other improved surface	64,572	48,287	45,187	—	40,635	13,121	5,960	170	217,932
Formed only	32,438	23,580	51,356	71,100	40,159	271	4,605	—	223,509
Cleared only	20,616	21,009	16,637	—	19,539	176	4,144	—	82,121
Total	**195,429**	**161,284**	**170,832**	**94,812**	**141,918**	**22,984**	**20,390**	**2,615**	**810,264**

(a) Excludes roads designated but not trafficable. Excludes Lord Howe Island and the unincorporated area of the Western Division. *(b)* Excludes roads coming under the responsibility of the State Electricity Commission and Forests Commission. *(c)* Excludes Forests Department roads. *(d)* Forestry roads have been reclassified from cleared only to gravel. *(e)* Excludes roads in towns and Local Government Areas.

AUSTROADS

AUSTROADS, the national association of State, Territory and Commonwealth road and traffic authorities, was established in July 1989 to replace the National Association of Australian State Road Authorities (NAASRA) which was established in 1934.

The present members of AUSTROADS are: the Roads and Traffic Authority, New South Wales; Vic Roads, Victoria; Department of Transport, Queensland; Main Roads Department, Western Australia; Department of Road Transport, South Australia; Department of Roads and Transport, Tasmania; Department of Transport and Works, Northern Territory; Australian Capital Territory Administration; and the Commonwealth Department of Transport and Communications.

AUSTROADS' mission is 'to pursue the effective management and use of the nation's roads as part of the Australian transport system, by the development and promotion of national policies and practices'.

AUSTROADS maintains a national perspective and provides strategic direction for the development, management and use of Australia's road system, involving consultation and discussion with peak bodies that have a stake in the road industry. It provides a forum which enables a national approach to the effective development and management of the Australian road system. This results in the coordination of road research, preparation of road and bridge design standards, improvements in and harmonisation of operating practices and reporting on the current status of the road network.

The operating structure is based on four programs:

- **Road and Road Transport Policy**—develops policy proposals addressing national road issues, e.g. major road issues, intermodal issues, environment, national social and economic developmental role of roads in land transport policy;
- **Road Use Management**—contributes to the safe and efficient use of roads, e.g. registration and licensing, road safety, traffic management, and freight industry policy;
- **Business Efficiency**—improves efficiency and effectiveness in the management and development of roads, e.g. management of assets, human resources quality, contracts, information and projects, performance measurement, investment appraisal, resource allocation; and
- **Road Technology**—develops and promotes national road technology policy and, in a joint arrangement with the Australian Road Research Board, promotes the development and application of the most appropriate and efficient road technology within the Australian road industry, e.g. through identification and support for R&D, technology transfer, standards development, harmonisation of practices, and international cooperation.

These programs are outcome orientated and are regularly evaluated to determine how effectively they meet the objectives of AUSTROADS.

The National Office arranges publication of policies and standards which are widely used by road authorities, local government, consultants and universities.

AUSTROADS cooperates with Standards Australia on the preparation of national standards, provides direction for road research, including research by the Australian Road Research Board and is a member of the Permanent International Association of Road Congress (PIARC) and of the Road Engineering Association of Asia and Australasia (REAAA).

Australian Road Research Board—ARRB

The Australian Road Research Board is a non profit-making company founded in 1960 by NAASRA, and is located at Vermont in Victoria. It is financed mainly by Commonwealth and State Government Road Authorities whose permanent heads, along with a representative of the Australian Council of Local Government Associations, 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.

The 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*, 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 road-related literature and research in progress. In 1987, the Information on Roads (INROADS) database was made publicly accessible on CSIRO's AUSTRALIS system. The INROADS database lists all ARRB publications from 1960, significant Australian road-related literature from 1977, publications catalogued for the ARRB Library, including some retrospective conversion of a card catalogue from 1984, and an annual update of current research in progress. INROADS supersedes the ARRB and ROAD databases.

The 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

The Commonwealth imposes safety and operational controls on the Australian aviation industry under the *Civil Aviation Act 1988* and the Civil Aviation Regulations. Under this legislation, a central Commonwealth agency, the Civil Aviation Authority, was established with effect from 1 July 1988 and vested with sole responsibility for the administration and enforcement of aviation safety within Australia. The Bureau of Air Safety Investigation which is directly responsible to the Minister and performs a safety audit function, remains within the Department of Transport and Communications.

In addition, the Commonwealth through the Department of Transport and Communications has oversight of such matters as the import and export of aircraft, the negotiation of international air transport agreements, the approval of international fares and freight rates, and the operation of scheduled passenger air services across State or Territory boundaries. Fares charged for the carriage of passengers on domestic scheduled air services are required to be approved by a Commonwealth statutory body, the Independent Air Fares Committee.

International activity

International organisations

Australia is one of the 163 (as at 30 June 1990) 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 represented on the 15 member 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, the Airport Operators Council International and the International Civil Airports Association.

International agreements

Australia as at 30 June 1990 has air service agreements with 28 countries. These agreements have full treaty status. Australia also has 10 air service arrangements, with less than treaty status, as of 30 June 1990 and two of these, Argentina and Switzerland, will be upgraded to treaty status when draft agreements are ratified. Under these agreements and arrangements, Qantas, Australia's designated airline, and the foreign carriers of Australia's bilateral partners are entitled to operate services to and/or through each others territories. Australia also has an agreement with the USSR relating principally to over-flight rights and charter services.

International scheduled services

At 30 June 1990, 38 international airlines were operating regular scheduled air services to and from Australia. The carriers (and contracting states) were:

Aerolineas Argentinas	(Argentina)
Air Caledonie International	(France)
Air China International	(People's Republic of China)
Air India	(India)
Air Nauru	(Nauru)
Air New Zealand	(New Zealand)
Air Niugini	(Papua New Guinea)
Air Pacific	(Fiji)
Air Vanuatu	(Vanuatu)
Alitalia	(Italy)
All Nippon Airways	(Japan)
American Airlines	(USA)
British Airways	(UK)
Canadian Airlines International	(Canada)
Cathay Pacific Airways	(UK)
Continental Airlines	(USA)
Federal Express	(USA)
Garuda Indonesian Airways	(Indonesia)
Hawaiian Airlines	(USA)
Japan Airlines	(Japan)
JAT Yugoslav Airlines	(Yugoslavia)
KLM Royal Dutch Airlines	(Netherlands)
Korean Air	(Korea)
Lauda Air	(Austria)
Lufthansa German Airlines	(Germany)
Malaysia Airlines System	(Malaysia)
Merpati Nusantara Airlines	(Indonesia)
Olympic Airways	(Greece)
Philippine Airlines	(Philippines)
Polynesian Airlines	(Western Samoa)
Qantas	(Australia)
Royal Brunei Airlines	(Brunei)
Singapore Airlines Ltd	(Singapore)
Thai Airways International	(Thailand)
United Airlines	(USA)
Union de Transport Aeriens	(France)

Polynesian Airlines Ltd also operates services on behalf of Cook Islands International (Cook Islands) and Air Pacific operates services on behalf of Solomon Islands Airlines (Solomon Islands) and Qantas.

Qantas, Australia's international airline, operated a fleet of 30 Boeing 747 and 12 Boeing 767 jet aircraft. All shares in Qantas Airways Limited are owned by the Commonwealth Government.

International non-scheduled services

Australia's passenger and freight charter policies encourage in-bound tourism and freight carriage particularly over routes not served by the scheduled carriers.

International traffic

The following table shows particulars of scheduled international airline traffic during 1988–89 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) 1988–89

Type of traffic	*Number of flights(b)(c)*	*Passengers*	*Freight tonnes*	*Mail tonnes*
Traffic to Australia—				
Qantas Airways Limited	7,870	1,659,227	58,426	1,226
Other airlines	11,699	2,358,377	106,658	7,253
All airlines	**19,569**	**4,017,604**	**165,084**	**8,479**
Traffic from Australia—				
Qantas Airways Limited	7,866	1,619,230	54,460	4,733
Other airlines	11,437	2,287,316	104,800	2,014
All airlines	**19,303**	**3,906,546**	**159,260**	**6,747**

(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 tables.

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

		1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988—89*
Hours flown	number	83,551	89,952	100,653	117,383	126,851	140,135
Kilometres flown	'000	65,670	71,046	79,050	91,874	98,999	109,102
Passengers—							
Embarkations	number	2,189,669	2,449,596	2,671,486	3,052,411	3,612,197	3,947,544
Passenger-kilometres	'000	15,247,801	16,858,595	18,233,088	21,258,519	24,535,745	26,516,771
Freight—							
Tonnes uplifted	tonnes	84,844	90,357	91,961	110,389	119,202	130,635
Tonne-kilometres	'000	563,268	637,590	691,352	811,627	855,260	929,458
Mail—							
Tonnes uplifted	tonnes	4,410	4,744	4,869	5,327	5,858	5,988
Tonne-kilometres	'000	40,324	43,231	45,370	51,819	57,946	61,049

AIR CARGO BY TRADE AREA, INWARD AND OUTWARD OVERSEAS, 1986–87

	Inward cargo		*Outward cargo*	
Trade area	*Gross weight*	*Value*	*Gross weight*	*Value*
	tonnes	$'000	tonnes	$'000
Europe	28,347	2,569,358	7,227	1,053,645
East Asia	9,224	350,016	17,620	767,140
Japan and North Asia	7,617	752,369	15,274	944,632
North America—East Coast	15,034	1,549,266	2,621	273,096
North America—West Coast	11,120	1,393,284	13,054	525,425
Central America and Carribbean	60	9,990	89	3,322
South America—East Coast	633	54,483	30	4,153
South America—West Coast	48	3,298	41	1,817
Africa—Mediterranean	—	8	5	521
West Africa	44	8,447	36	423
South and East Africa	483	317,398	459	17,828
Red Sea and Mediterranean Middle East	175	32,689	985	11,811
Middle East Gulf	22	13,118	17,855	62,409
West India	797	39,902	539	9,787
East India	1,384	37,968	176	31,359
South-East Asia	4,506	306,146	30,101	396,067
New Zealand	21,942	460,271	29,721	645,072
Papua New Guinea and Solomon Islands	264	124,854	2,868	85,118
Pacific Islands and other countries	952	29,276	5,210	62,579
Trade area not specified	16	2,762	8,421	203,882
Total	**102,668**	**8,054,903**	**152,332**	**5,100,086**

The air cargo statistics set out in the above 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*.

Domestic activity

Economic regulation and deregulation

The Commonwealth Government has announced its intention to deregulate domestic aviation in Australia and to open the nation's interstate air services to free competition, effective from 31 October 1990.

The Commonwealth's regulation on economic grounds of domestic interstate air transport has been conducted through arrangements commonly known as the 'two-airline policy'. Under the policy, the operation of regular passenger air services over the main domestic or 'trunk' routes has been restricted generally to the Commonwealth-owned Australian Airlines Ltd and the privately-owned Ansett Airlines of Australia.

The Commonwealth has maintained the policy essentially by using the Customs (Prohibited Imports) Regulations to restrict operators' access to aircraft which could then be used to compete with Australian Airlines or Ansett over the trunk routes. Since 1981, the policy has also been based on the following Commonwealth legislation: the *Airlines Agreement Act 1981*, the *Airlines Equipment Amendment Act 1981* and the *Independent Air Fares Committee Act 1981*.

Effective from 31 October 1990, the Government will withdraw from detailed economic regulation of domestic air fare setting, aircraft imports, capacity controls and route entry, and the above Commonwealth legislation will be repealed. Commonwealth regulation will be replaced by an environment where new entrant airlines will be allowed access to interstate trunk routes, and airlines in general will be free to make their own decisions concerning air fares and capacity on interstate routes.

Customers' interests will be maintained through the application of the Trade Practices Act and scrutiny of the Prices Surveillance Authority which apply to industry generally.

Major airlines

The major airlines providing domestic air services in Australia are the Ansett group, comprising Ansett Airlines of Australia, Air NSW, Ansett WA and Ansett NT; East–West Airlines; Australian Airlines; and IPEC Pty Ltd, a cargo operator. TNT and News Ltd jointly own both the Ansett group and East–West.

At 30 June 1990, the Ansett group's fleet consisted of eight Airbus A320s, five Boeing 767-200s, six Boeing 727-200s, 12 Boeing 737-300s, five Fokker F28-1000s, one Fokker F28-4000, and seven Fokker F50s.

Australian Airlines operated a fleet of four Airbus A300s, one Boeing 727-100, 10 Boeing 727-200s, and 15 Boeing 737-300s.

East–West Airlines operated a fleet of two Fokker F28-3000s and five Fokker F28-4000s.

The Interstate Parcel Express Company Australia Pty Ltd, trading as IPEC Aviation, operates cargo airline services using two DC9 aircraft.

Commuter services

Some 45 commuter operators provided regular public transport air services to approximately 250 ports in Australia at 30 June 1989.

The aircraft types currently used by commuter operators are predominantly in the 6–9 seat category, such as the Piper PA31 and Cessna 310, 402 and 404 series. Larger types used include Twin Otter, Beech King Air, Metroliner, Embraer Bandeirante, British Aerospace Jetstream 31 and Shorts 330 and 360. During 1988, commuter operators carried an estimated 1.3 million passengers.

General aviation

In addition to scheduled services, there is a wide range of other activities undertaken by the aviation industry, including business flying, aerial work, aerial agriculture, charter, training and private flying. Hours flown by general aviation during 1987–88 were estimated at 1.7 million. Charter operation made up 21.8 per cent of general aviation hours flown in 1987–88, the highest proportion of any activity. Charter operations involve the use of aircraft in operations for the carriage of passengers and cargo for hire or reward which are not scheduled or available to the public. Approximately 650 operators in Australia hold charter licences.

Scheduled domestic airline services

Statistics of all regular domestic airline services are set out in the following table.

AVIATION INDUSTRY ACTIVITY HIGHLIGHTS AUSTRALIA

Domestic airlines	*1985–86*	*1986–87*	*1987–88*	*1988–89*	*1989–90p*
Domestic Airlines—					
Passengers (thousands)	12,099.8	12,506.7	13,647.9	14,012.1	9,878.0
Passenger kilometres performed (millions)	11,293.4	12,046.6	13,267.2	13,732.7	9,954.3
Revenue passenger load factor (per cent)	72.6	72.1	75.2	76.4	72.4
Cargo tonnes (thousands)*(a)*	168.5	154.3	164.1	169.1	99.4
Cargo tonnes kilometres (millions)*(a)*	156.8	146.6	157.1	161.4	95.8
Total tonnes kilometres (millions)	1,173.2	1,230.8	1,351.2	1,397.4	991.6
Revenue weight load factor (per cent)	64.2	61.6	63.1	63.7	61.0
Hours flown (thousands)	264.1	276.7	285.3	290.3	186.8
Aircraft movements (thousands)	432.2	433.8	429.8	420.0	272.0
Commuter airlines—					
Passenger (thousands)	1,101.6	1,169.2	1,224.7	p1,324.1	n.a.
Cargo tonnes (thousands)*(a)*	3.7	3.7	3.9	n.a.	n.a.

(a) Includes freight and mail.

Airport activity—domestic passengers

The statistics set out in the next table have been compiled by aggregating all domestic 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 MAJOR AIRLINES PASSENGER UPLIFTS AND DISCHARGES AT PRINCIPAL AUSTRALIAN AIRPORTS

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89p*
Sydney	5,501,492	5,900,743	6,330,523	6,660,129	7,374,065	7,541,281
Melbourne	4,550,568	4,851,880	5,155,985	5,313,403	5,827,494	5,999,957
Brisbane	2,554,622	2,684,608	2,799,420	2,973,743	3,312,524	3,581,535
Adelaide	1,684,281	1,762,845	1,824,983	1,704,871	1,833,001	1,876,691
Perth	1,049,567	1,127,184	1,245,409	1,352,214	1,437,035	1,478,055
Canberra	838,175	931,673	990,222	1,006,652	1,087,595	1,073,519
Coolangatta	567,623	630,474	731,145	844,581	1,005,622	1,080,222
Cairns	404,168	426,206	495,434	627,703	777,316	823,262
Hobart	448,549	481,612	493,411	474,345	511,308	519,055
Townsville	388,752	404,463	410,260	415,870	400,439	379,362
Launceston	352,494	390,867	361,797	351,432	351,004	371,327
Darwin	281,032	302,590	334,079	341,835	366,639	388,324

Aerodromes

As at 30 June 1990, there were 428 Commonwealth or licensed aerodromes in Australia and its Territories. Of these, 23 were owned and operated by the Federal Airports Corporation, three of them being shared with the Department of Defence. A further 42 were owned by the Commonwealth under the control of Commonwealth departments. The remaining 363 were owned by either local authorities or private organisations.

In 1989-90, capital expenditure on facilities at Commonwealth civil aerodromes was $2 million. Maintenance grants paid to licensed aerodromes under the Aerodrome Local Ownership Plan (ALOP) during the year totalled $9.1 million, of which $2.3 million was for works at Karratha where the local shire has accepted full responsibility for Karratha and Roebourne aerodromes. A further $1.5 million was paid for development works at licensed aerodromes participating in the ALOP. This included funding of $1 million for transfer works at Port Lincoln and Mangalore, and works at Forbes, Gladstone and Thangool associated with their withdrawal from the ALOP.

Upgrading of security at airports

The Commonwealth Government announced on 20 November 1989 its decision to upgrade security at 23 security designated airports around Australia. As a result, the counter-terrorist first response presence has been increased at nine airports and will be introduced for the first time at 14 other airports during June to December 1990. The Australian Protective Service is now responsible for providing this service at all major airports, except Canberra.

This decision was taken in light of international trends, assessed security needs and in response to an earlier decision by the Government to redefine the role of the Australian Federal Police (AFP). The AFP has now withdrawn from performing the uniformed policing function at all airports, except Canberra.

The need for a uniformed armed presence at airports to reduce the potential for unlawful interference with civil aviation in Australia has become increasingly important. Other countries are tightening their security measures following the explosive sabotage of Pan Am Flight 103 over Lockerbie, Scotland on 21 December 1988 and other incidents, and in response to appeals from the International Civil Aviation Organisation.

Against this background, the decision to increase the counter-terrorist presence at security designated airports demonstrates a strong commitment to aviation security, and is part of a general upgrading of aviation security arrangements in Australia.

Airway facilities

A total of 567 navigation aids were in service at 31 October 1989. The Civil Aviation Authority maintains and operates a network of 252 non-directional beacons (NDB), 108 Australian Domestic Distance Measuring Equipment (DME-D), 29 International Distance Measuring Equipment (DME-I), 86 VHF omnidirectional range systems (VOR) and 18 instrument landing systems (ILS).

Included in this total are a number of facilities on licensed aerodromes and oil platforms—65 NDBs, one DME-D, four DME-Is and two ILS which are privately owned.

In addition, there are 11 NDBs operated by the Department of Defence and 11 NDBs operated by the Department of Transport and Communications.

There are 32 Air Traffic Control Centres, 42 Flight Service Units and 27 Rescue and Fire Fighting Units in operation throughout Australia.

Air transport registrations and licences in force in Australia

At 30 June 1989, there were 8,437 aircraft registered in Australia. At the same time there were 45,399 current aeroplane pilot licence holders, including 25,436 private pilots, 5,159 commercial pilots, 1,817 senior commercial pilots, 2,497 air transport pilots and 10,490 student pilots.

In addition, there were 2,135 current helicopter pilot licence holders of which 258 were private pilots, 1,017 commercial pilots, 126 senior commercial pilots and 734 student pilots. There were also 11 gyroplane, 73 commercial balloon, 527 flight engineer and nine navigator licences in force.

Accidents and casualties

AIR TRANSPORT: ACCIDENTS INVOLVING CASUALTIES(a) AUSTRALIA(b)

	1983	*1984*	*1985*	*1986*	*1987*	*1988*
Number	44	40	31	40	44	53
Persons killed	47	45	43	44	33	63
Persons seriously injured	29	25	27	31	42	32

(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, TELECOMMUNICATIONS AND RADIOCOMMUNICATIONS 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.

Australian Postal Corporation

The Australian Postal Corporation operates under the *Australian Postal Corporation Act 1989* which commenced operation on 1 July 1989. This Act is the second and final stage of legislative changes to Australia Post which implement the Government's micro-economic reform package for Government Business Enterprises.

Australia Post's principal function is to supply postal services within Australia and between Australia and overseas. Its subsidiary function is to carry on any business or activity relating to postal services either domestically or overseas.

Australia Post provides surface and airmail services within Australia and to and from other countries. Special services provided include express courier, electronic mail, faxpost, lettergram, priority paid mail, business reply post, cash-on-delivery, certified mail, freepost, a security post 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 Commonwealth, 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 operation.

AUSTRALIAN POSTAL CORPORATION: PROFIT AND LOSS
($'000)

Year ended 30 June	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*
Revenue—						
Mail services	971,676	1,080,539	1,186,422	1,370,930	1,501,487	1,644,869
Commission on agency services	90,449	94,547	87,291	83,328	89,803	88,031
Postal money order service	11,632	11,940	11,846	12,384	13,242	16,792
Other revenue	21,993	24,269	39,832	38,440	51,847	61,516
Total	**1,095,750**	**1,211,295**	**1,325,391**	**1,505,082**	**1,656,379**	**1,811,208**
Expenditure—						
Labour and related expenditure	831,600	911,776	973,294	1,049,186	1,131,190	1,251,284
Carriage of mail by contractors	92,984	103,551	109,418	121,183	132,832	151,131
Depreciation and interest	15,299	17,159	22,294	27,744	38,454	39,748
Other expenditure	131,716	154,301	189,530	252,079	298,955	323,186
Total	**1,071,599**	**1,186,787**	**1,294,536**	**1,450,192**	**1,601,431**	**1,765,349**

AUSTRALIAN POSTAL CORPORATION: PROFIT AND LOSS STATEMENT FOR THE YEAR ENDED 30 JUNE 1989
($'000)

Revenue—	
Mail services	1,644,869
Commission on agency services	88,031
Postal money order services	16,792
Other revenue	61,516
Total	*1,811,208*
Expenditure—	
Labour and related expenditure	1,251,284
Carriage of mail by contractors	151,131
Accommodation	79,334
Stores and supplies	101,801
Depreciation	34,466
Interest	5,282
Other operating expenditure	142,051
Total	*1,765,349*
Operating Profit	**45,859**
Appropriations—	
Accumulated profit brought forward	116,584
Operating profit for the year	45,859
Adjustments to provision	15,754
Accumulated profit carried forward	178,197

AUSTRALIAN POSTAL CORPORATION: PERSONS ENGAGED IN PROVIDING POSTAL SERVICES AT 30 JUNE 1989 AND 1990

	HQ	*NSW (incl. ACT)*	*Vic. and Tas.*	*Qld*	*SA (incl. NT)*	*WA*	*Aust. 1990*	*Aust. 1989*
Official staff*(a)*—								
Full-time permanent	618	12,519	9,693	4,225	2,509	2,417	31,981	30,934
Full-time temporary	19	1,536	796	415	176	184	3,126	3,855
Part-time	—	1,786	1,153	654	435	521	4,549	3,824
Other staff*(b)*	—	2,568	2,137	1,850	721	782	8,058	7,879
Total	637	18,409	13,779	7,144	3,841	3,904	47,714	46,492

(a) 'Official staff' are those whose employment is governed by the *Australian Postal Corporation Act 1989*. *(b)* Includes persons who are not employed under the Australian Postal Corporation Act, but who are engaged on the basis of business transacted. Also included are persons or organisations who hold road mail service contracts with the Australian Postal Corporation.

AUSTRALIAN POSTAL CORPORATION: MAIL DELIVERY NETWORK AND POST OFFICES AT 30 JUNE 1988 AND 1989

	NSW (incl. ACT)	*Vic.*	*Qld*	*SA (incl. NT)*	*WA*	*Tas.*	*Aust. 1989*	*Aust. 1988*
Households receiving mail	2,202,950	1,555,179	1,002,468	585,808	557,905	163,708	6,068,018	5,943,124
Business receiving mail	234,469	158,334	112,010	58,645	59,999	16,028	639,485	607,177
Post offices—								
At 1 July 1988	496	333	218	143	153	40	..	1,383
At 30 June 1989	490	330	218	141	153	40	1,372	..
Agencies—								
At 1 July 1988	925	840	521	390	247	183	..	3,106
At 30 June 1989	904	836	516	380	244	180	3,060	..
Total post offices and agencies	**1,394**	**1,166**	**734**	**521**	**397**	**220**	**4,432**	**4,489**

AUSTRALIAN POSTAL CORPORATION: TOTAL POSTAL ARTICLES HANDLED ('000)

Year ended 30 June	*Posted for delivery within Australia*	*Posted for places abroad*	*Received from abroad*	*Total postal articles handled*
1984	2,764,113	106,585	164,362	3,035,060
1985	2,877,476	107,783	163,074	3,148,333
1986	2,970,353	115,688	166,444	3,252,485
1987	3,143,251	125,995	169,306	3,438,552
1988	3,342,321	142,280	177,417	3,662,018
1989	3,564,366	157,605	193,988	3,915,959

AUSTRALIAN POSTAL CORPORATION: ORDINARY POSTAL ARTICLES(a)
('000)

Year ended 30 June	Standard articles: Posted for delivery within Australia	Posted for places abroad	Received from abroad	Total articles
1987	2,689,440	108,228	122,379	2,920,047
1988	2,862,775	122,613	128,407	3,113,775
1989	3,033,166	136,039	141,055	3,310,260
STATES—YEAR ENDED 30 JUNE 1989				
New South Wales (incl. ACT)	1,169,937	50,862	74,128	1,294,927
Victoria	860,007	37,997	40,635	938,639
Queensland	443,579	23,440	10,534	477,553
South Australia (incl. NT)	249,694	10,393	4,492	264,579
Western Australia	249,747	13,347	11,094	274,188
Tasmania	60,202	—	172	60,374

(a) Includes certified, messenger delivery and priority paid mail.

Telecommunications Services Within Australia

The Australian Telecommunications Corporation was established on 1 January 1989 after amendments to the Australian Telecommunications Act. A new Board of Directors was formed and this arrangement was continued under the Australian Telecommunications Corporation Act which came into force on 1 July 1989.

The formation of the new Corporation was in response to major Government policy changes which saw the abolition of the former Australian Telecommunications Commission. The Commission was created on 1 July 1975 under the *Telecommunications Act 1975*.

The Australian Telecommunications Corporation operates under the trading name Telecom Australia.

The responsible Minister is the Minister for Transport and Communications, assisted by the Minister for Telecommunications and Aviation Support.

Functions

The main function of the Corporation is to supply telecommunications services within Australia. A subsidiary function is to carry on, outside Australia, any business or activity relating to telecommunications.

Telecom has several obligations:

- to perform its functions in a manner that is consistent with sound commercial practice;
- to ensure that, in view of its social importance, the public switched telephone service is reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business;
- to ensure the performance standards for the public switched telephone service reasonably meet the social, industrial and commercial needs of the Australian community; and
- to perform its functions, in a manner that is consistent with any general policies of the Commonwealth Government notified by the Minister, any directions given by the Minister, and Australia's obligations under any convention.

Subsidiary companies and joint ventures

As at 30 June 1989, Telecom subsidiary and joint venture companies were:

- Telecom Australia (International) Ltd—100 per cent owned;

- Telecom Australia (Saudi) Ltd—50 per cent owned;
- Telesoft Communications Pty Ltd—100 per cent owned;
- QPSX Communications Pty Ltd—74 per cent owned;
- QPSX Communications Australia Pty Ltd—100 per cent owned;
- QPSX Systems Inc. (US)—100 per cent owned;
- Information Switching Technology Pty Ltd—60 per cent owned;
- Advanced Network Management Pty Ltd—60 per cent owned;
- T-Net Pty Ltd—60 per cent owned;
- Telecom Messagetech Pty Ltd—51 per cent owned;
- Natsoft Communications Pty Ltd—50 per cent owned;
- Telecom Technologies Pty Ltd—50 per cent owned;
- National Registries Pty Ltd—50 per cent owned;
- Telecom–Hewlett Packard Pty Ltd—50 per cent owned;
- AUSSAT Pty Ltd—25 per cent owned; and
- Infonet Services Corporation—5 per cent owned.

Telecom also participates in two companies, National Protocol Support Centre Ltd and Australian Electronic Development Centre Ltd which are limited by guarantee and have no share capital.

Statistics

The following table shows selected statistics relating to the latest three years of the Corporation's operations.

AUSTRALIAN TELECOMMUNICATIONS CORPORATION: SUMMARY OF SELECTED STATISTICS

Year ended 30 June		*1987*	*1988*	*1989*
		FINANCIAL		
Revenue	$ million	6,047.5	7,199.5	7,976.8
Expenses	"	5,604.2	6,423.3	7,003.7
Operating profit	"	443.3	776.6	973.1
Rate of return	%	10.6	12.0	13.8
Addition to fixed assets	$ million	2,403.1	2,236.1	2,580.5
Net value of fixed assets	"	12,759.4	12,073.1	13,045.4
		TRAFFIC (million)		
Telephone calls				
Local		7,538.9	8,074.7	8,126.5
Trunk		1,328.1	1,488.5	1,652.8
To overseas		47.8	65.9	85.1
Cellular mobile telephone calls		n.a.	27.9	74.0
Total		*n.a.*	*9,657.0*	*9,938.4*
Calls to recorded information services		129.7	137.2	124.0
		NETWORK AND OPERATIONS		
Telephone				
Demand for new services		610,267	650,809	706,120
Connection of new services		617,806	643,834	682,907
Services in operation		6,816,301	7,091,549	7,419,982
Data services				
Modems in operation		103,726	103,962	97,890
Digital data service—network terminating units		35,210	52,489	68,117
AUSTPAC service—number of outstations			3,924	6,015
		STAFF		
Average full-time staff		93,857	89,659	84,104

Australia's National Satellite System—AUSSAT

AUSSAT Pty Ltd

AUSSAT Pty Ltd was established by the Commonwealth Government in November 1981 as a commercial company to own, operate and manage Australia's National Satellite System.

AUSSAT's Memorandum and Articles of Association and the *Satellite Communications Act 1984* require the company to:

- provide a telecommunications system for Australia by using space satellites and make available the facilities for use in telecommunications systems in neighbouring regions;
- provide service on a non-discriminatory basis and to set fair and equitable charges; and
- operate as a commercial taxpaying enterprise paying reasonable dividends to the shareholders.

The company currently has a paid up equity capital of $100 million. Seventy-five per cent of its shareholding is held by the Australian Government with the remaining 25 per cent being held by Telecom Australia.

AUSSAT has a board of nine directors and employs a staff of some 270 people, the majority of whom are highly qualified engineers, technicians and scientists.

The Australian National Satellite System

AUSSAT's first generation satellite system comprises three Hughes Aircraft Company HS 376 spin stabilised satellites. Geostationary orbit locations are: AUSSAT 1—160°E longitude, AUSSAT 2—156°E longitude with AUSSAT 3 at 164°E longitude, some 36,000 kilometres above the earth, directly over the equator.

Each satellite has a minimum design life of seven years. The first two satellites, launched by the Space Shuttle in August and November 1985 respectively, are expected to achieve a seven and a half-year life. It is expected that AUSSAT 3, launched in September 1987 by the European ARIANE rocket, will achieve an on-orbit life of some ten years.

Each satellite carries four high powered (30 watt) transponders and eleven standard power (12 watt) transponders, providing a total of 12x30 watt transponders and 33x12 watt transponders on the three satellite first generation system. The satellites operate in the 12–14 GHz KU Band, on a dual polarised basis to provide for re-use of band width.

The three dish antenna system used on the Australian satellites is a unique and distinguishing feature. The antenna array enables each satellite to provide national beam coverage of the entire Australian continent and its offshore regions and four spot beams covering:

- North-East (Queensland);
- Central Australia (Northern Territory and South Australia);
- West (Western Australia); and
- South-East (New South Wales, Victoria and Tasmania).

The satellites also have the capability of providing a switched beam to cover Papua New Guinea, and AUSSAT 3 has a switched beam capability covering the south-west Pacific region and New Zealand.

AUSSAT also operates two telemetry, tracking command and monitoring ground stations. The main centre is located in the Sydney suburb of Belrose, and it is from this station that final positioning and maintenance of the satellites in the geostationary orbit is monitored and controlled. A backup to the Belrose Satellite Control Centre is located in the Perth suburb of Lockridge.

Ground segment

AUSSAT owns and operates a network of eight Major City Earth Stations (MCES) located in Melbourne, Hobart, Adelaide, Perth, Darwin, Brisbane, Sydney and Canberra.

These facilities are designed to provide 'gateway' access to the satellites for AUSSAT customers whose requirements for services do not warrant the purchase of their own satellite earth stations. Microwave or land line connection from each station to customer premises is available.

Applications

The first AUSSAT satellite was commissioned for service on 1 October 1985 with the second satellite coming on-line on 1 January 1986 and AUSSAT 3 in November 1987.

Since commencing operation, the satellite system has proven to be an outstanding success with demand for capacity being far greater than originally projected. More than 80 per cent of available capacity on the first two satellites has been contracted and is now in service.

The design of the satellite communications payload and beam configuration provides multi-purpose capabilities for the system. It allows for the provision of broadcast services for television and radio, as well as program distribution and interchange and for a full range of telecommunication services such as voice, video, telex and data.

Summary of current AUSSAT applications

Broadcasting direct-to-home

The single largest application at the present time is the provision of broadcasting services for television and radio directly into homes in remote outback regions of Australia. This service, known as the Homestead and Community Broadcasting Satellite Service (HACBSS) is being provided, initially, by the Australian Broadcasting Corporation (ABC). The HACBSS service provided by the ABC comprises television programming, two AM radio services and a stereo FM radio service.

With the launch and commissioning of AUSSAT 3, the service provided by the ABC is being supplemented by a similar commercial service known as the Regional Commercial Television Service.

Major network television

Australia's three major television networks are also large users. Each network has leased a standard power (12 watt) transponder and is using the satellite system for program distribution, news gathering and itinerant special program events, such as sporting fixtures.

Aviation

The Department of Transport and Communications has contracted for a total of four standard power transponders which will be used to establish a fully duplicated network of reliable voice and data links between 46 staffed air traffic control facilities and 55 unstaffed remote VHF air-to-ground facilities throughout Australia.

Commercial applications

Apart from the applications detailed above, AUSSAT has contracted with a number of government agencies and commercial organisations for the provision of a wide variety of services. Uses range from the provision of private network voice, video and data services to exciting applications in entertainment distribution, remote and long distance education, emergency services, health and medical services, including the use of slow scan television for diagnostic purposes.

The next generation

AUSSAT has contracted for the manufacture and in-orbit delivery of its second generation satellite system planned for launch in 1991–92.

The system, to be built by Hughes Communications International of Los Angeles, United States, will comprise two much larger satellites providing increased capacity and higher power.

Apart from ensuring continuity of established services, the second generation satellites will carry L Band transponders to enable the establishment of a domestic mobile satellite service. This service will be operational by 1992 and could potentially be the first such domestic service in the world.

Overseas Telecommunications Services

OTC Limited

OTC Limited has provided Australia's telecommunications links with the world since 1946.

Formerly the Overseas Telecommunications Commission, OTC had its beginnings in the early 1940s, when the Australian Government decided it should control its own international communications services which were then being provided by private enterprise companies.

The primary areas of activity for the infant OTC were international telegraph, radio telephone services and a coastal radio service which still provides commercial communications, weather, navigational and distress services to maritime traffic in Australian coastal waters.

Communications networks

From the 1950s, when the expansion of international business required the girdling of the globe with coaxial cable systems, OTC has been a major investor in new communications technologies. It is one of the world's largest owners of submarine cable systems and was early to recognise the potential of satellite communications.

OTC is a founding member of both the International Telecommunications Satellite Organisation (INTELSAT) and the International Maritime Satellite Organisation (INMARSAT).

It is now using its experience of more than 40 years to develop communications networks in other parts of the world. It has built satellite earth stations in locations as diverse as the Antarctic, Vietnam, the Cocos and Christmas islands, Malta and Laos.

From the beginning of 1990, it will provide the opportunity for 15 small nations in the South Pacific to gain access to modern, satellite-based communications systems, hubbed from the OTC Sydney Satellite Earth Station.

OTC became a company, OTC Limited, on 1 April 1989. All shares are held by the Australian Government.

Parallel changes to the industry's regulatory framework have introduced a more competitive marketplace. This new environment has led OTC to become a joint venturer with other companies in the Australian domestic value added services market with particular interests in electronic mail, electronic documents interchange, communications computer software and database access.

In the year ended 31 March 1990, OTC reported a record after-tax profit of $234.5 million from total revenue of $1,517 million. The company expects to invest more than $2,000 million on expanding Australia's international telecommunications capacity in the next decade.

Over 2,000 people are currently employed by OTC.

OTC has satellite earth stations in Sydney, Perth, Ceduna, and Melbourne; it has cable stations in Cairns, Sydney, Norfolk Island and Perth; international gateway exchanges in

Sydney and Melbourne, with another under construction in Perth; international radio stations in Sydney; and 13 maritime communications stations around Australia's coastline.

OTC's corporate headquarters are in Sydney and it has business offices in Melbourne, Brisbane and Canberra. It also maintains international business offices in London, New York, Tokyo, Bangkok, Wellington and Hong Kong.

Radiocommunication Stations

At 30 September 1989, there were 1,012,847 civil radiocommunication stations authorised for operation in Australia and its Territories. Of these, 508,115 were associated with land mobile services, 49,023 were fixed services, 69,754 were for marine services, 322,281 were citizens band (CB) stations and 18,154 were amateur stations. Particulars of broadcasting stations are shown in the following section.

BROADCASTING AND TELEVISION

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Government and pursuant to the *Broadcasting Act 1942*, is one of the responsibilities of the Minister for Transport and Communications. Commonwealth bodies which are involved include the Australian Telecommunications Corporation (Telecom), the Australian Broadcasting Corporation (ABC), the Special Broadcasting Service (SBS), the Australian Broadcasting Tribunal (ABT), the Department of Transport and Communications, the Overseas Telecommunications Corporation (OTC), AUSTEL and AUSSAT Pty Ltd.

Basically, the Australian broadcasting system comprises the following types of services:

- national radio and television services broadcasting programs produced by the Australian Broadcasting Corporation and the Special Broadcasting Service;
- commercial radio and television services operated by companies under licence; and
- public radio services operated by incorporated associations under licence on a non-profit basis.

As from 1 January 1977, the Minister for Transport and Communications assumed 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 Australian Broadcasting Corporation

The Australian Broadcasting Corporation (ABC) is an independent statutory corporation funded primarily by appropriation from the Commonwealth Parliament.

The ABC, founded as the Australian Broadcasting Commission on 1 July 1932, became the Australian Broadcasting Corporation on 1 July 1983.

The *Australian Broadcasting Act 1983* requires the ABC to:

- provide within Australia innovative and comprehensive radio and television services of a high standard;
- provide programs that contribute to a sense of national identity, inform and entertain, and reflect the cultural diversity of the Australian community;
- provide radio and television programs of an educational nature;
- promote Australia's musical, dramatic and other performing arts; and
- transmit to other countries radio and television programs of news, current affairs, entertainment and cultural enrichment.

National Broadcasting Service

The ABC provides:

- five main radio services across Australia on 403 transmitters:
    - — Metropolitan Radio in all State capitals, Canberra, Darwin and Newcastle;

- Regional Radio studios and outposts in over 40 regional centres throughout Australia;
- Radio National, a nationally networked service which is being extended throughout Australia;
- ABC-FM, a national network devoted to music and performance; and
- Triple J, and FM youth network which is being made available to State capitals, Canberra and Newcastle.

- a national television service carried on 471 transmitters with television production and transmission centres in all State capitals, Darwin and Canberra; and
- ABC concerts (the ABC is also responsible for six Symphony Orchestras).

Television and radio programs produced by the ABC are broadcast through transmitters operated by Telecom Australia on behalf of the ABC and the Department of Transport and Communications.

International Broadcasting Service

Seven high frequency stations at Shepparton (Victoria), three on the Cox Peninsular at Darwin (Northern Territory), three at Carnarvon (Western Australia) and two at Brandon (Queensland) provide the international shortwave service known as Radio Australia. The transmitters are maintained and operated by Telecom Australia, with programs arranged and presented by Radio Australia from its Melbourne studios. There is an emphasis on news and current affairs, information programs and sports coverage serving the needs and interests of the Asia/Pacific region.

The broadcasts—in English, Indonesian, Standard Chinese, Cantonese, Tok Pisin, French, Thai, Japanese and Vietnamese—are directed to the Pacific, Southeast/South Asia and North Asia. The English Service is also heard in the Middle East, United Kingdom, Europe and North and South America. Overall, the services reach an estimated 50 million regular listeners.

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 was gazetted in August 1978. The service is also empowered by the *Broadcasting Act 1942* 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 radio services to the Melbourne metropolitan area and Geelong through radio station 3EA which broadcasts in 55 languages for 126 hours per week; the Sydney metropolitan area through radio station 2EA which broadcasts in 59 languages for 126 hours per week; the provincial centres of Newcastle and Wollongong in NSW through 2EA translator services; plus on relay to a small number of public broadcasting stations throughout Australia.

It also provides Australia's sole national UHF-only television network. Since inception in October 1980, SBS-TV has grown from servicing Melbourne and Sydney only, to providing a television transmission in all capital cities (except Darwin) plus several major regional centres.

The commercial radio and television service

Commercial radio and television services are operated by companies under licences granted by the Australian Broadcasting Tribunal and with technical operating conditions determined by the Minister for Transport and Communications. The services obtain income from broadcasting advertisements. At 30 June 1990, there were 146 commercial radio services in operation in Australia (including three supplementary licences). Call signs for radio services are prefixed by numerals indicating each State of Australia (2—New South Wales and the Australian Capital Territory, 3—Victoria, 4—Queensland, 5—South Australia, 6—Western Australia, 7—Tasmania, 8—Northern Territory). In addition, there were 47 commercial television services in operation in Australia. Many of these services have one or more radiocommunications transmitters to enable the service from the principal transmitter to be provided to the entire service area.

A number of commercial radio and television transmitters known as rebroadcasting services were in operation at 30 June 1990. These have low power and are designed to receive and rebroadcast the signals of the service in whose area they are located. The permits are not held by the licensees of the service which is being rebroadcast but are held by a community group or a company in the area, a local council or some other government authority. The ABC and some SBS services are retransmitted in this manner.

At 30 June 1990, there were three remote commercial television services licensed, transmitting their programs via satellite to remote localities in the Western Zone (Western Australia), Central Zone (Northern Territory and South Australia) and North-East Zone (Queensland).

There was also one remote radio service providing a monophonic service via satellite to remote localities in the Western Zone.

The public broadcasting service

The Broadcasting Act also makes provision for the granting of licences for the operation of public radio and television services. At 30 June 1990, 80 public radio services were broadcasting programs ranging from fine music to ethnic languages and programs produced by and directed towards specific communities. Some public radio services are associated with tertiary educational institutions. There are no public television services permanently operating in Australia.

Radiocommunication stations

At 30 June 1990, there were 1,185,181 civil radiocommunication stations authorised for operation in Australia and its Territories. Of these, 610,407 were associated with land mobile services, 52,289 were fixed services, 75,526 were for marine services, 380,037 were citizen band (CB) stations and 18,689 were amateur stations. Particulars of broadcasting stations are shown below.

BROADCASTING STATIONS, 30 JUNE 1990

Type of station	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
National ABC—									
Medium frequency (AM)	25	9	22	11	25	7	6	3	108
High frequency (HF)	—	—	2	—	1	—	3	—	6
Very high frequency (FM)	26	9	89	25	68	7	25	1	(a)250
National SBS—									
Medium frequency (AM)	3	1	—	—	—	—	—	—	4
Very high frequency (FM)	—	—	—	—	—	—	—	—	—
International—									
Short wave (Radio Australia)	—	7	3	—	3	—	3	—	16
Commercial—									
Medium frequency (AM)	47	19	34	9	22	8	3	2	144
Very high frequency (FM)	7	5	6	3	10	1	1	2	(a)35
Public—									
Medium frequency (AM)	2	2	2	1	1	1	—	2	(b)11
Very high frequency (FM)	32	17	9	7	5	5	7	1	83

(a) Includes services licensed under Self-Help Scheme. *(b)* Includes RPH service.

TELEVISION TRANSMITTER STATIONS, 30 JUNE 1989

Type of station and location	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
National—									
Metropolitan television	6	12	4	4	2	4	1	6	39
Country television	74	29	114	21	69	21	26	—	354
Total, National	*80*	*41*	*118*	*25*	*71*	*25*	*27*	*6*	*393*
Commercial—									
Metropolitan television	9	21	9	6	3	2	1	7	58
Country television	76	25	68	18	71	20	7	—	285
Total, Commercial	*85*	*46*	*77*	*24*	*74*	*22*	*8*	*7*	*343*

The Australian Broadcasting Tribunal

The Australian Broadcasting Tribunal came into being on 1 January 1977. It is an independent statutory authority established by the *Broadcasting Act 1942* to regulate some aspects of commercial and public radio and commercial television in Australia. The Tribunal is empowered to grant, renew, suspend or revoke licences, to determine program and advertising standards applicable to licensed stations, to authorise changes to the ownership and control of licences, and to collect and make available information about broadcasting in Australia. 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 other matters.

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Transport Establishments: Selected Items of Data Classified by Industry and Size Group, 1983–84 (9105.0)

Road Freight Activity of Private Enterprises by Industry Division, Australia and States, 1983–84 (9107.0)

Shipping and Air Cargo Commodity Statistics, Australia (9206.0)

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Interstate Freight Movement, Australia (9212.0)

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Interstate Freight Movement, Australia (9214.0)

Motor Vehicle Registrations, Australia (9303.0)

Motor Vehicle Registrations, Australia (9304.0)

Motor Vehicle Census, Australia (9309.0)

Road Traffic Accidents Involving Fatalities, Australia (9401.0)

Road Traffic Accidents Involving Casualties (Admission to Hospitals), Australia (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 and Communications, the various harbour boards and trusts, the several government railway authorities, the Federal Airports Corporation, the Australian Postal Corporation, the Australian Telecommunications Corporation, and the Australian Broadcasting Corporation.

22

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.

There are many organisations in Australia concerned in some way with the development of science and technology in Australia.

The Commonwealth Government's conviction of the importance of science and technology is reflected in the functions of the Department of Industry, Technology and Commerce. Apart from having general responsibility for science and technology, the Department is concerned with the development and maintenance of Australia's scientific and technological capability.

A number of other Commonwealth Government organisations either support or carry out scientific and technological activities. State Governments are also involved in science and technology via State government departments, science and technology councils and other organisations. Non-government organisations participating in scientific and technological activities include higher education institutions, professional and learned bodies, private organisations and industry groups.

Information on scientific and technological activities presented in this chapter includes:

- Australian Bureau of Statistics data on resources devoted to research and experimental development (R&D) and other innovative activities. The R&D surveys cover organisations in the business enterprise, general government, private non-profit and higher education sectors.
- Department of Industry, Technology and Commerce statistics on expenditure on R&D and other scientific and technological activities carried out or funded by Commonwealth Government organisations.
- Australian Bureau of Statistics information on manufacturing industry technology operations and trade categorised into high technology, medium technology and low technology (industries or commodities).

The Department of Industry, Technology and Commerce—DITAC

Following the Administrative Arrangements Order of 24 July 1987, the Industry, Technology and Commerce portfolio has primary responsibility for advising the Government and implementing policy in relation to Australian science and technology; manufacturing and service industries; export services and customs and excise.

Within the portfolio, DITAC is the central point of contact for industry, unions, other Commonwealth departments, and State and local governments on matters relating to manufacturing, and service industries. DITAC incorporates parts of the former Departments of Science, Trade, and Housing and Construction. The major scientific and technological aspects of the portfolio include the following bodies and activities.

The Commonwealth Scientific and Industrial Research Organisation—CSIRO

CSIRO was established as an independent statutory authority by the *Science and Industry Research Act 1949*. The Act has been amended on a number of occasions since then, including in 1978, following the government-instigated 'Birch Committee of Inquiry' and in November 1986, following the 'Review of Public Investment in Research and Development in Australia', specifically including CSIRO, carried out by the Australian Science and Technology Council (ASTEC).

The 1986 amendments to the Act confirm that CSIRO's primary role is to continue as an applications-oriented research organisation in support of major industry sectors and selected areas of community interest, but with a stronger commitment to the effective transfer of its results to users. The most recent amendments have also included changes to the top management structure and the organisation's advisory mechanisms.

Briefly, CSIRO's primary statutory functions are to:

- carry out scientific research for the benefit of Australian industry, the community, national objectives, national or international responsibilities, or for any other purpose determined by the Minister; and
- encourage or facilitate the application or utilisation of the results of such research.

Other functions include dissemination and publication of scientific information, international liaison in scientific matters, and provision of services and facilities.

The research work of the organisation is carried out in Institutes, each headed by a Director and each specifically established to undertake work in support of industry or community interest sectors of the Australian economy. Institutes are composed of Divisions, which are individually responsible for broad programs of research in support of the objectives of the Institute.

Institute of Information, Science and Engineering: Divisions of Information Technology; Radiophysics; Mathematics and Statistics; CSIRO Office of Space Science and Applications; Australia Telescope.

Institute of Industrial Technologies: Divisions of Manufacturing Technology; Materials Science and Technology; Applied Physics; Chemicals and Polymers; Biomolecular Engineering.

Institute of Minerals, Energy and Construction: Divisions of Building, Construction and Energy (now incorporates National Building Technology Centre); Exploration Geoscience; Mineral and Process Engineering; Mineral Products; Coal and Energy Technology; Geomechanics.

Institute of Animal Production and Processing: Divisions of Animal Health; Animal Production; Wool Technology; Tropical Animal Production; Food Processing; Human Nutrition.

Institute of Plant Production and Processing: Divisions of Plant Industry; Tropical Crops and Pastures; Horticulture; Entomology; Soils; Forestry and Forest Products.

Institute of Natural Resources and Environment: Divisions of Water Resources; Fisheries; Oceanography; Atmospheric Research; Wildlife and Ecology; Centre for Environmental Mechanics.

CSIRO has a total staff of more than 7,000 in more than 100 locations throughout Australia. About one-third of the staff are professional scientists, with the others providing technical, administrative or other support. CSIRO's budget for 1988–89 was $466 million.

The Australian Nuclear Science and Technology Organisation—ANSTO

ANSTO was established on 27 April 1987 as a statutory authority by the Commonwealth Parliament under the *Australian Nuclear Science and Technology Organisation Act Number 3 of 1987*. ANSTO replaces the Australian Atomic Energy Commission which had been in existence since 1953.

ANSTO has its headquarters at the Lucas Heights Research Laboratories, 30 kilometres south-west of Sydney. Of its staff of some 800, about 250 are qualified scientists and engineers. Its mission is to benefit the Australian community by the development and peaceful application of nuclear science and technology in industry, medicine, agriculture, science and other fields. In this mission, ANSTO maintains a high regional and international standing in nuclear matters and both provides advice to and carries out tasks as required by the Commonwealth Government.

The five major research program areas of ANSTO are:

- isotope technology;
- industrial technology applications of nuclear physics;
- biomedicine and health;
- environmental science; and
- advanced materials.

ANSTO is broadening its commercial ethos with research being directed to achieve the organisation's social and corporate goals. Because its multidisciplinary body of expertise is located at one centre, together with its two nuclear research reactors and other specialised laboratory equipment, ANSTO can provide a range of unique and essential techniques and services to the Australian community. Established under the ANSTO legislation is the independent Nuclear Safety Bureau which is responsible for monitoring and reviewing the safety of nuclear reactor plant operated by ANSTO. The Bureau reports to the Minister responsible for administration of the ANSTO Act. ANSTO's annual expenditure is in the order of $67 million with sales revenue of approximately $12 million.

The 150 per cent tax concession for Research and Development

The 150 per cent tax concession for Research and Development (R&D) is the major initiative in the Government's package of measures to encourage industrial R&D in Australia. The incentive which commenced in July 1985, was originally due to end on 30 June 1991. In May 1989, the Government announced that the concession will be available at 150 per cent until 30 June 1993. A reduced incentive of 125 per cent will then be available until 1995.

The concession allows companies incorporated in Australia, public trading trusts and partnerships of eligible companies to deduct up to 150 per cent of eligible expenditure incurred on R&D activities when lodging their corporate tax return.

To attract the full 150 per cent deduction, annual eligible R&D expenditure must exceed $50,000, with a sliding scale operating from 100 to 150 per cent where annual R&D expenditures range from $20,000 to $50,000.

Where eligible R&D is contracted to an approved Registered Research Agency (RRA) the expenditure threshold is waived with all expenditure attracting the full 150 per cent concession.

Grants for Industry, Research and Development—GIRD

Discretionary Grants

The Discretionary Grants scheme provides support to companies which have insufficient taxation liability to obtain adequate benefit from the 150 per cent tax concession for research and development but have the potential to fully exploit the results of their research and development. Discretionary grants may be available to companies who are carrying on or intending to carry out the following activities:

- manufacture of goods;
- mining operations or operations for natural oil or gas recovery;
- construction operations relating to buildings or works; and
- production of software for computers or similar equipment.

Supported projects must be directed to internationally competitive and internationally traded goods, systems and services.

Generic Technology Grants

The Generic Technology Grants Scheme provides support for the development of enabling technologies (i.e. technologies with a pervasive and multiplying effect) by funding early-stage, strategic research. A major objective of the scheme is also to foster collaboration between industry and public sector research institutions.

The scheme currently provides support for research and development in the areas of:

- biotechnology;
- new materials technology;
- communications technology; and
- information technology.

The scheme may be extended in the future to include other technology areas.

Grants are provided to Australian research organisations for approved research projects. All projects are required to be supported by commercial interests.

National Teaching Company Scheme

The National Teaching Company Scheme (NTCS) which is administered by the Department of Industry, Technology and Commerce, is part of the Australian Government's program to facilitate the growth and competitiveness of Australian industry. The Scheme fosters the development of links between companies and supporting institutions such as tertiary education institutions and public research agencies, by subsidising the cost of employing and supervising high calibre graduates in *projects designed to improve company performance* through the adoption of appropriate technology or methodology in manufacturing, marketing, management accounting, design and strategic planning.

The NTCS provides up to $50,000 grant support over a maximum of two years. Of this, $34,000 is paid to the employer (i.e. either the company or institution) towards the salary and short term employment on costs of the graduate, $10,000 is paid to the participating department of the supporting institution for the provision of academic support costs and equipment and an additional $6,000 is paid to the employer towards administrative costs of employing the graduate.

National Procurement Development Program—NPDP

The NPDP was established in September 1987 following the Government's consideration of the Inglis Report on High Technology Purchasing by government departments and agencies.

The program is a competitive grants scheme aimed at improving the international competitiveness of Australian industry by supporting the research, development, trialing and demonstration of innovative Australian products or services which have substantial local content and are directed towards meeting government purchasing requirements.

Projects are to be developed by a commercial partner in conjunction with a government agency. To qualify for grant support, projects must demonstrate a sustainable competitive advantage in international markets. Grants are available for projects which exceed $50,000 and can be completed in less than three years. The maximum grant rate is 50 per cent of project expenditure.

Patent, Trade Marks and Designs Offices

The Offices, through their Central Office in Canberra and office in each State capital, administer Australia's industrial property systems for the protection of patents, designs and trade marks.

The Offices maintain an information database on inventions and industrial designs to facilitate the transfer and diffusion of technology. A database of registered trade marks is also maintained. This information is available to the public through the Offices.

Policy, Planning and Coordination Branch develops policy initiatives for making industrial property laws more relevant to the needs of Australian industry and commerce. The Branch coordinates the office's participation in international cooperation on industrial property issues bilaterally and through Australia's membership of international agreements and organisations.

The National Industry Extension Service—NIES

The competitive edge for Australian manufacturing industry lies as much in the quality of its management as it does in other economic factors. In pursuing an export culture, the Australian Government in partnership with each of the State and Territory Governments has established the National Industry Extension Service (NIES) to deliver the best management advice and assistance to Australian manufacturers.

NIES encourages Australian manufacturers to take a strategic view of their enterprises and to implement strategies for marketing, manufacturing, product innovation, human resources and quality. Companies are assisted by a network of service providers including private sector consultants, academic institutions and government agencies. NIES expects a long term association with companies and works collaboratively with AUSTRADE to prepare companies to meet the rigours of international markets.

The Management and Investment Companies Program

In 1984, the Government established the Management and Investment Companies Program. The objectives of the Program are:

- to promote the development of a private sector venture capital industry in Australia; and
- to encourage the provision of management skills and equity finance to young, fast growing, export-oriented businesses using innovative technology.

The Program will terminate on 30 June 1991.

The Bureau of Industry Economics

Primary responsibility for the Department's Industry Research Program lies with the Bureau of Industry Economics which was established in 1977 as a centre for research into the Australian manufacturing and commerce sectors of the economy. The Bureau is assisted in devising its research program by a Council of Advice, comprising business and union leaders and prominent academics.

The Bureau's research program is concerned with a broad range of industry policy issues, including:

- individual industry studies as well as the investigations of general issues affecting a broad range of manufacturing and service industries;
- forward-looking studies on the likely future development of Australian industry, as well as detailed investigations of the factors responsible for the performance of industry in the recent past; and
- aspects of industrial technology and production as well as pricing and marketing issues.

Evaluation of the effectiveness of existing government policies and programs is an important part of the Bureau's research. The Bureau also contributes to policy reviews, including Industries Assistance Commission and other public inquiries, and assesses the economic aspects of papers put to it by industry and trade unions.

The Snowy Mountains Engineering Corporation—SMEC

SMEC is a public company fully owned by the Australian Government which operates as engineering consultants and project managers in Australia and overseas. Since its development from the Snowy Mountains scheme in 1970, SMEC has now grown into a multidisciplined consulting organisation of international standing in civil, electrical and mechanical engineering. SMEC has completed some 1,350 projects in 48 countries, including Australia. These projects have a capital value of $A4,500 million and involved fees of $A320 million.

A full range of expert engineering consulting services are provided by SMEC for pre-feasibility investigations, feasibility studies, field and laboratory investigations, design, project management, construction supervision, operation and maintenance, training and many individual tasks.

Projects have included hydro-electric and multipurpose water resources development, river basin studies, dams and power stations, power transmission and distribution, irrigation and flood control, roads and bridges, tunnels, shafts and underground works and pipelines.

SMEC, as well as working on projects in all States of Australia, has provided consulting services for projects throughout Asia and the Pacific islands, in Africa, the Middle East, and in North and South America.

SMEC is registered as an engineering consultant with United Nations agencies, World Bank, Asian Development Bank, Commonwealth Fund for technical cooperation, Kuwait Fund for Arab Economic Development, Arab Bank for Economic Development in Africa and the Australian International Development Assistance Bureau. Projects have been successfully carried out in many countries, using finance from these donor and lending institutions.

The Corporation was a recipient of two Australian Government Export Awards in 1977 and 1982, and the Governor-General's Award for Export Excellence in 1984.

SMEC has a staff of over 220 professionals, technical and administrative support staff. Its headquarters are in Cooma, NSW. Branch offices are located in Sydney, Brisbane and Canberra. International branch offices are located in Dhaka, Gaborone, Jakarta and Kuala Lumpur, with project offices in many other locations.

Marine Industries Program

The objective of the Marine Industries Program is to encourage the development of internationally competitive marine based manufacturing and service industries through the application of science and technology.

The review of marine industries, science and technology by the McKinnon Committee published in 1989 as 'Oceans of Wealth' showed that marine industries generate some $16 billion of economic wealth annually for Australia, of which $4.5 billion is in exports.

The review found that there was significant potential for further development but that to achieve this development would require stronger linkages between science and technology and industry.

The heads of the Government's marine science and technology agencies will be asked to work with the Department of Industry, Technology and Commerce to examine areas of potential industry development, to bring marine research and development more closely into line with industry requirements, and to play a key role in inter-cooperation in marine science and technology.

The Government allocated $3.9 million over the ensuing five years to support relevant projects and activities.

The Commission for the Future

The Commission's objective of raising community awareness of all aspects of the social and economic impacts of technological change is based on the premise that industrial restructuring and technological development alone are insufficient for the development of a productive Australian culture. A need exists for an information and education program directed at increasing support for, and understanding of, scientific and technological change and long-term options for Australia.

The Australian Space Office

The Office was established in 1987 to oversee Australia's general space effort under the guidance of the Australian Space Board. It is responsible for developing an Australian space industry and managing the $6.3 million National Space Program. It provides policy and secretariat support for the Space Board and implements agreements for the support of foreign civilian space programs, particularly for NASA and ESA.

A space industry development strategy has been prepared and is now being implemented. The strategy focuses on the priority areas of remote sensing, satellite based communications and launch site services. The Office is also examining a number of potential 'national interest' space projects.

The Office is the key Commonwealth Government body responsible for monitoring and facilitating developments in the proposal by Cape York Space Agency (CYSA) to build a commercial spaceport at Cape York in north Queensland.

The National Standards Commission

The Commission is a Commonwealth Statutory Authority established in 1948 and presently located at North Ryde, Sydney. The Commission operates under the National Measurement Act and is directed by a Board comprising a part-time chairman and seven commissioners. The Commission has responsibility for advising the Government on the scientific, technical and legislative requirements of the Australian National Measurement System and for coordinating that system. In addition, the Commission has specific responsibilities for legal metrology, the completion of metrication and uniformity of trade measurement. The Commission also examines and approves the patterns of measuring instruments used for trade to ensure the instruments will maintain their calibration and will not be affected by environmental factors (e.g. temperature, humidity or electromagnetic interference).

The Commission provides Australia's representative on the International Committee of Legal Metrology and ensures that Australian legal measurement requirements are nationally uniform and internationally harmonised. Through conferences and liaison with government authorities the Commission aims to ensure the traceability of all legal measurements to Australia's primary standards of measurement.

The Commission maintains close liaisons with government authorities, industry and commerce and consumer groups to ensure adequacy of measurement throughout Australia. The Commission provides the Chairman and secretariat for the Standing Committee on Trade Measurement, the Trade Measurement Consultative Committee and Working Parties on oil and gas flow measurement and time measurement.

The Commission is currently developing a National Metrology Policy that will include a policy for the training of metrologists and calibration technicians.

Other Commonwealth Government Science and Technology Activities

Many other Commonwealth Government agencies play a significant role in the science and technology area. A number of these agencies are involved with R&D activities either as funders, performers or both; others are active in the S&T areas of information dissemination, scientific services and scientific training.

Total Commonwealth government expenditure on research and development measured in the ABS Research and Development Survey for 1987–88 amounted to $807 million.

State Government science and technology activities

State Governments are major performers and supporters of scientific and technological activities. Many States have particular departments established for the purpose of encouraging and coordinating the use of technology in industry (e.g. the Victorian Department of Industry, Technology and Resources). Several States (New South Wales, Queensland, Western Australia and South Australia) have also established science and technology councils which provide advice to State Governments on science and technology matters and promote the expansion of technology.

In addition to fostering science and technology, many State government departments are large performers of scientific and technological activities. Traditionally, for instance, those departments involved with agriculture (e.g. the Victorian Department of Agriculture and Rural Affairs and various State departments of agriculture) spend large sums on the R&D which they perform and also have a high profile in the general S&T activities of extension and laboratory services.

The total 1987–88 expenditure for R&D carried out by State government organisations measured in the ABS Research and Development Survey was $378 million.

Tertiary education institutions' science and technology activities

Tertiary education institutions play a vital role in the two major S&T areas. These being R&D and scientific and technical training.

Higher education institutions receive direct funding for research purposes from a number of sources, the major one being the Commonwealth Government. Commonwealth funds include those grants and awards distributed through the Australian Research Council; and grants awarded by the National Health and Medical Research Council and through the National Energy Research, Development and Demonstration Program.

Indirect research funding for higher education institutions includes both the proportion of general funds from the Higher Education Funding Act allocated by institutions to research and the amount attributable to research but coming from general teaching-and-research funds (e.g. the estimated research portion of the salaries of teaching-and-research staff). The latest available figures for total higher education research expenditure (direct plus indirect sources) came from the ABS Research and Development Survey for 1987 which gives an estimated expenditure of $984 million.

Institutes of TAFE receive very little research funding from the Commonwealth. The Australian Bureau of Statistics does not measure R&D effort for institutes of TAFE.

Data on higher education and TAFE enrolments are presented in Chapter 10, Education. That chapter also gives a more detailed picture of higher education facilities in Australia.

Other Organisations' Science and Technology Activities

There are many other non-government organisations playing an important part in Australia's scientific and technological development. They include various learned and professional bodies such as the Australian Academy of Science, the Australian Academy of Technological Science, the Academy of Social Sciences in Australia and the Australian and New Zealand Association for the Advancement of Science. Their activities include provision of advice in the relevant scientific fields, dissemination of scientific information and enhancement of communication on scientific matters.

A number of private organisations from time to time provide advice to government on specific matters relating to science and technology. Examples from the business sector are the Australian Chamber of Manufacturers, the Business Council of Australia and the Confederation of Australian Industry. Other organisations with an interest in scientific and technological issues include trade unions, industry groups with an interest in specific technologies and individual private organisations.

As performers of research and experimental development, private organisations in Australia are making an increasingly important contribution to Australia's R&D effort. Private business enterprises, for instance, spent an estimated $1,218 million on R&D in 1987–88, a figure which, whilst still relatively low compared with the spending of comparable OECD countries, represents an increase of 14 per cent over 1986–87 expenditure. Private non-profit organisations in 1987–88 spent $50 million on R&D.

Statistics on Science and Technology

Expenditure and human resources devoted to research and experimental development

The Australian Bureau of Statistics' Surveys of Research and Experimental Development provide comprehensive data on research and experimental development activities in Australia by organisations in the business enterprise, general government, higher education and private non-profit sectors. They also provide some data on other innovative activities, such as technical know-how payments and receipts and patenting activity. Activities not covered by the survey include scientific or technological services, extension services, education and training, etc.

The first comprehensive survey on R&D was carried out for the financial year 1968–69. There have been seven major surveys since then, the latest for which comprehensive results are available being in respect of 1988–89 (1988 calendar year for the Higher Education Sector). Less detailed data in respect of 1987–88 are available from the smaller 'inter year' R&D survey conducted by the Bureau.

The estimate of gross expenditure on R&D (GERD) carried out in Australia, as derived from the results of the 1988–89 survey, is $4,187 million. This represents a 14 per cent increase compared with the 1987–88 survey. At constant (1984–85) prices, GERD increased by nine per cent over the same period. The total estimate of human resources devoted to R&D during 1988–89 in Australia was 64,820 person years; this represented a five per cent increase compared with the 1987–88 survey.

See Year Book No. 70 for a detailed description of survey methods and concepts.

Definitions

The survey's definitions 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'. The Bureau provides sector specific definitions which clarify the OECD definitions for respondents and users (*see Research and Experimental Development, All Sector Summary, Australia* (8112.0)).

Survey results

A summary of results from the 1984–85 to 1988–89 surveys is presented below.

HUMAN RESOURCES OF EFFORT DEVOTED TO RESEARCH AND EXPERIMENTAL DEVELOPMENT, AUSTRALIA
(person years)

Sector	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Business Enterprises—					
Private Sector	11,324	13,431	16,070	16,650	18,357
Public Sector	1,238	1,353	1,395	1,327	1,352
General Government—					
Commonwealth	11,119	11,182	11,518	11,491	11,498
State	6,018	6,337	6,627	7,125	7,643
Higher Education—					
Universities	19,814	20,143	21,690	22,435	22,939
CAEs	1,030	*(a)*	1,529	1,888	1,963
Private non-profit	712	812	997	1,023	1,068
Total	**51,255**	**53,258**	**59,824**	**61,939**	**64,820**

(a) Estimates for Colleges of Advanced Education were not collected this year.

GROSS EXPENDITURE ON RESEARCH AND EXPERIMENTAL DEVELOPMENT (GERD) CARRIED OUT IN AUSTRALIA
GERD AT CURRENT AND AVERAGE 1984–85 PRICES
($ million)

Sector	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
		AT CURRENT PRICES			
Business Enterprises—					
Private Sector	653.7	852.2	1,147.0	1,317.5	1,602.5
Public Sector	77.3	95.7	122.6	111.0	136.0
General Government—					
Commonwealth	669.4	729.0	785.9	797.0	862.0
State	285.9	315.8	357.9	394.6	453.2
Higher Education—					
Universities	663.1	707.6	844.9	929.8	1,022.3
CAEs	22.7	*(a)*	36.7	53.8	54.5
Private non-profit	43.5	47.1	52.8	54.2	56.7
Total	**2,415.6**	**2,747.4**	**3,347.9**	**3,657.9**	**4,187.1**
		AT AVERAGE 1984–85 PRICES			
Business Enterprises—					
Private Sector	653.7	793.9	983.8	1,051.4	1,214.0
Public Sector	77.3	89.2	105.8	91.6	108.1
General government—					
Commonwealth	669.4	688.3	693.2	654.2	672.8
State	285.9	297.1	312.6	323.6	354.2
Higher Education—					
Universities	*(b)*679.8	700.7	750.8	788.7	819.7
CAEs	*(b)*23.3	*(a)*	32.2	40.3	41.0
Private non-profit	43.5	44.2	48.7	47.4	47.3
Total	**2,432.9**	**2,613.4**	**2,927.1**	**2,997.2**	**3,257.1**

(a) Estimates for Colleges of Advanced Education were not collected this year. *(b)* Average 1984–85 price details are not the same as Current Price details because the Higher Education subsections are on a calendar year basis.

GROSS EXPENDITURE ON RESEARCH AND EXPERIMENTAL DEVELOPMENT (GERD) CARRIED OUT IN AUSTRALIA
GERD BY SECTOR BY SOURCE OF FUNDS
($'000)

Sector	*Total*	*Common-wealth government*	*State government*	*Business enterprises*	*Higher education*	*Private non-profit and other Australian*	*Overseas*
			1986–87				
Business Enterprises—							
Private Sector	1,146,970	53,370	3,924	1,077,040	269	459	12,903
Public Sector	122,646	8,664		112,986			—
General Government—							
Commonwealth	785,920	754,378	3,833	22,881	108	347	4,374
State	357,884	30,487	294,573	17,968	413	13,641	802
Higher Education—							
Universities	844,949	788,970	9,010	9,659	8,943	22,121	6,245
CAEs	36,732	6,305	2,975	8,806	17,300	1,167	180
Private non-profit	52,809	20,042	6,712	2,472	411	18,703	4,468
Total	**3,347,909**	**1,662,216**	**321,027**	**1,251,811**	**27,444**	**56,439**	**28,973**
			1988–89				
Business Enterprises—							
Private Sector	1,602,457	57,737	2,689	1,496,180	168	5,912	40,321
Public Sector	136,017	2,900	1,642	130,926			—
General Government—							
Commonwealth	861,998	809,305	3,862	40,617	—	2,651	5,563
State	453,193	42,859	368,340	22,092	228	18,513	1,162
Higher Education—							
Universities	1,022,275	943,958	11,856	18,676	—	40,961	6,824
CAEs	54,518	11,228	4,779	8,906	28,057	1,180	369
Private non-profit	56,688	19,741	5,660	4,834	632	23,628	2,193
Total	**4,187,145**	**1,887,728**	**398,828**	**1,722,230**	**29,084**	**92,843**	**56,431**

Business enterprise sector

The estimate of expenditure on R&D carried out in Australia by private and public business enterprises during 1984–85, 1986–87 and 1988–89 are shown in the next table at *current* prices. At average 1984–85 prices, R&D expenditure is estimated to have increased by 81 per cent and 21 per cent over 1984–85 and 1986–87 respectively.

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY BUSINESS ENTERPRISES(a), AUSTRALIA, DETAILS OF RESOURCES DEVOTED TO R&D BY INDUSTRY OF ENTERPRISE

Industry of enterprise		*Enterprises (number)*			*Expenditure on R&D ($m)*			*Person years of effort on R&D*		
ASIC Code	*Description*	*1984–85r*	*1986–87r*	*1988–89*	*1984–85r*	*1986–87r*	*1988–89*	*1984–85r*	*1986–87r*	*1988–89*
11–15	*Mining (excluding services to mining)*	*31*	*39*	*46*	*30.4*	*55.6*	*67.8*	*303*	*524*	*582*
	Manufacturing—									
21	Food, beverages and tobacco	92	106	101	30.9	56.7	82.7	658	815	832
23–24	Textiles, clothing and footwear	27	35	41	5.6	12.9	7.8	57	119	107
25	Wood, wood products and furniture	29	47	45	3.4	6.4	9.8	69	118	111
26	Paper, paper products, printing and publishing	22	32	29	6.4	10.0	21.1	139	158	234
27	Chemical, petroleum and coal products	180	270	255	91.1	120.1	148.0	1,576	1,857	1,664
28	Non-metallic mineral products	33	39	45	12.69	15.3	22.3	223	178	206
29	Basic metal products	32	47	52	46.1	63.7	91.7	681	865	966
31	Fabricated metal products	92	129	131	15.6	23.0	25.7	309	392	376
32	Transport equipment	65	98	120	90.1	127.9	159.6	1,476	1,562	1,753
334	Photographic, professional and scientific equipment	30	67	69	16.5	25.7	37.5	283	433	512
335	Appliances and electrical equipment	286	590	560	84.4	174.5	228.3	1,611	2,835	3,319
336	Industrial machinery and equipment	177	254	252	28.5	43.3	54.9	566	720	783
34	Miscellaneous manufacturing	77	102	112	8.5	21.6	26.1	178	329	379
C	*Total manufacturing*	*1,142*	*1,816*	*1,812*	*440.1*	*701.1*	*918.5*	*7,824*	*10,380*	*11,243*
	Other industries—									
F	Wholesale and retail trade	194	293	290	36.5	96.8	152.3	641	1,230	1,642
63	Property and business services	450	588	503	82.0	178.4	211.8	1,352	2,376	2,553
8461	Research and scientific institutions	43	80	97	28.8	45.3	127.9	497	640	1,109
(*b*)	Other n.e.c.	126	213	217	113.3	192.4	260.1	1,946	2,315	2.580
16, D–L	*Total other industries*	*813*	*1,174*	*1,107*	*260.6*	*513.0*	*752.1*	*4,436*	*6,561*	*7,884*
	Total all industries	**1,986**	**3,029**	**2,965**	**731.1**	**1,269.6**	**1,738.5**	**12,563**	**17,465**	**19,709**
Private Sector Contribution		1,939	2,967	24911	653.7	1,147.0	1,602.5	11,324	16,070	18,357
Public Sector Contribution		47	62	54	77.3	122.6	136.0	1,238	1,395	1,352

(a) Excludes enterprises in ASIC Division 'A'. (*b*) ASIC codes 16,D,E,G,H,61–62,J,8141–8306,8462–8495,L.

Payments and receipts for patent licence fees and other technical know-how

Many Australian business enterprises supplement their R&D efforts by either purchasing or licensing foreign or Australian technology. Data for 1984–85, 1986–87 and 1988–89 are presented below.

PAYMENTS AND RECEIPTS FOR TECHNICAL KNOW-HOW BY BUSINESS ENTERPRISES(a), AUSTRALIA, PAYMENTS AND RECEIPTS BY INDUSTRY OF ENTERPRISES
($ million)

Industry of enterprise		*Payments for technical know-how*			*Receipts for technical know-how*		
ASIC Code	*Description*	*1984–85r*	*1986–87r*	*1988–89*	*1984–85r*	*1986–87r*	*1988–89*
	Manufacturing—						
21	Food, beverages and tobacco	16.8	23.6	26.7	1.1	2.8	2.6
23–24	Textiles, clothing and footwear	8.9	n.p.	n.p.	n.p.	n.p.	n.p.
25	Wood, wood products and furniture	0.1	0.2	1.6	n.p.	0.6	n.p.
26	Paper, paper products, printing and publishing	4.1	4.0	n.p.	n.p.	n.p.	n.p.
27	Chemical, petroleum and coal products	39.1	53.3	67.8	6.6	6.2	2.1
28	Non-metallic mineral products	7.8	1.8	7.8	n.p.	n.p.	1.0
29	Basic metal products	4.7	9.8	23.8	6.1	n.p.	2.6
31	Fabricated metal products	2.3	3.9	8.6	1.1	1.2	1.1
32	Transport equipment	17.4	35.5	49.8	n.p.	1.0	3.9
334	Photographic, professional and scientific equipment	n.p.	n.p.	3.1	n.p.	n.p	n.p.
335	Appliances and electrical equipment	28.3	48.4	34.8	n.p.	3.8	13.5
336	Industrial machinery and equipment	n.p.	8.7	9.6	1.4	n.p.	5.3
34	Miscellaneous manufacturing	4.9	11.0	15.2	n.p.	n.p.	3.0
C	*Total manufacturing*	*146.6*	*236.5*	*258.6*	*23.8*	*48.6*	*36.2*
	Other industries—						
F	Wholesale and retail trade	4.3	11.3	14.7	0.5	4.2	6.6
63	Property and business services	8.0	7.7	n.p.	6.2	37.0	60.4
8461	Research and scientific institutions	n.p.	n.p.	n.p.	n.p.	3.0	13.5
(b)	Other n.e.c.	n.p.	n.p.	22.5	n.p.	8.7	7.9
11–16, D–L	*Total other industries*	*19.9*	*41.0*	*79.2*	*12.3*	*53.0*	*88.5*
	Total all industries	**166.5**	**277.5**	**337.8**	**36.1**	**101.6**	**124.7**

(a) Excludes enterprises in ASIC Division 'A'. *(b)* ASIC Codes 11–16,D,E,G,H,61–62,J,8141–8306,8462–8495,L.

General government sector

The estimate of expenditure on R&D carried out in Australia by organisations in the general government sector during 1984–85, 1986–87 and 1988–89 are shown in the next table at *current* prices. At average 1984–85 prices, R&D expenditure is estimated to have increased by eight per cent and two per cent over 1984–85 and 1986–87 respectively.

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY GENERAL GOVERNMENT ORGANISATIONS, AUSTRALIA
DETAILS OF RESOURCES DEVOTED TO R&D BY SOCIO-ECONOMIC OBJECTIVE

	Expenditure on R&D ($m)			*Person years of effort on R&D*		
Socio-economic objective	*1984–85r*	*1986–87r*	*1988–89*	*1984–85r*	*1986–87r*	*1988–89*
National security (Defence)	*151.0*	*175.1*	*202.5*	*3,232*	*3,146*	*3,078*
Economic development—						
Agriculture	320.8	387.7	440.2	5,846	6,505	6,835
Forestry and fisheries	48.1	63.3	75.2	924	1,055	1,169
Mining (prospecting)						
Energy sources	12.8	14.9	14.2	202	187	139
Other	23.2	27.0	43.1	344	371	515
Mining (extraction)						
Energy sources	7.9	2.8	4.0	120	42	55
Other	8.4	7.6	8.3	138	127	110
Manufacturing	103.8	119.1	129.1	1,725	1,696	1,770
Construction	13.3	15.5	19.9	265	280	283
Energy	51.8	47.0	43.7	644	546	478
Transport	16.9	16.6	22.0	220	281	288
Communications	0.3	1.3	1.8	6	10	21
Economic services n.e.c.	20.2	18.0	23.0	404	409	419
Total economic development	*627.4*	*720.6*	*824.5*	*10,836*	*11,509*	*12,082*
Community welfare—						
Urban and regional planning	0.4	1.7	1.0	12	40	20
Environment	36.0	60.9	85.3	692	701	946
Health	43.0	61.5	65.6	1,070	1,199	1,432
Education	5.9	6.7	17.3	145	151	202
Welfare	3.7	7.2	8.3	86	118	121
Community services n.e.c.	9.1	20.8	31.6	175	262	395
Total community welfare	*98.1*	*158.8*	*209.2*	*2,181*	*2,471*	*3,115*
Advancement of knowledge—						
Earth, ocean and atmosphere n.e.c.	72.7	82.2	66.9	778	865	687
General advancement of knowledge	6.2	7.2	12.1	109	153	179
Total advancement of knowledge	*78.9*	*89.3*	*79.0*	*887*	*1,018*	*866*
Total	**955.3**	**1,143.8**	**1,315.2**	**17,136**	**18,144**	**19,141**

Higher education sector

The estimate of expenditure on R&D carried out in Australia by higher education organisations during 1984, 1986 and 1988 are shown in the next table at *current* prices. At average 1984–85 prices, R&D expenditure is estimated to have increased by 57 per cent and 22 per cent over 1984 and 1986 respectively.

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY HIGHER EDUCATION ORGANISATIONS, AUSTRALIA
R&D EXPENDITURE BY SOCIO-ECONOMIC OBJECTIVE

	Expenditure on R&D ($m)								
	1984			*1986r*			*1988*		
Socio-economic objective	*Total*	*Univer-sities*	*CAEs*	*Total*	*Univer-sities*	*CAEs*	*Total*	*Univer-sities*	*CAEs*
National security (Defence)	*1.2*	*1.2*	—	*1.9*	*1.7*	*0.2*	*2.5*	*2.2*	*0.2*
Economic development—									
Agriculture	58.9	57.3	1.5	74.2	72.0	2.1	85.5	81.5	4.0
Forestry and fisheries	8.2	8.0	0.2	8.9	8.6	0.4	12.0	11.2	0.8
Mining (prospecting)									
Energy sources	1.8	1.7	0.1	4.1	3.7	0.3	3.6	3.3	0.4
Other	3.4	3.2	0.1	7.2	7.0	0.2	6.2	5.5	0.7
Mining (extraction)									
Energy sources	1.0	1.0	0.1	1.3	1.2	0.1	2.8	2.5	0.3
Other	3.6	3.3	0.3	6.8	5.6	1.2	8.3	6.8	1.5
Manufacturing	18.6	16.1	2.4	28.9	24.1	4.8	46.1	39.4	6.8
Construction	7.2	6.9	0.3	9.1	8.2	0.8	12.5	11.2	1.4
Energy	25.4	23.7	1.7	27.3	25.4	1.9	29.9	27.4	2.5
Transport	3.7	3.2	0.5	4.7	4.2	0.5	4.9	4.5	0.4
Communications	6.0	5.5	0.4	8.2	7.2	1.0	10.3	8.9	1.4
Economic services n.e.c.	18.6	17.5	1.1	36.1	33.3	2.8	49.7	46.4	3.3
Total economic development	*156.4*	*147.6*	*8.8*	*216.6*	*200.6*	*16.1*	*271.9*	*248.6*	*23.4*
Community welfare—									
Urban and regional planning	4.3	4.1	0.2	6.0	5.6	0.4	7.0	6.2	0.8
Environment	12.6	11.5	1.0	17.2	15.7	1.4	28.4	25.8	2.6
Health	139.8	134.8	5.0	187.6	180.8	6.8	226.2	216.3	9.9
Education	26.6	23.6	3.0	36.7	32.9	3.8	41.9	35.1	6.8
Welfare	8.3	8.0	0.3	10.0	9.1	0.9	8.6	7.9	0.7
Community services n.e.c.	13.3	12.8	0.8	18.8	17.0	1.7	21.9	19.8	2.1
Total community welfare	*204.8*	*194.5*	*10.4*	*276.2*	*261.1*	*15.0*	*334.1*	*311.0*	*23.0*
Advancement of knowledge—									
Earth, ocean and atmosphere n.e.c.	42.3	41.8	0.6	50.4	49.9	0.6	50.7	49.5	1.2
General advancement of knowledge	281.0	278.1	2.9	336.6	331.7	4.9	417.6	410.9	6.7
Total advancement of knowledge	*323.3*	*319.9*	*3.5*	*387.0*	*381.6*	*5.4*	*468.3*	*460.4*	*7.9*
Total	**685.7**	**663.1**	**22.7**	**881.7**	**844.9**	**36.7**	**1,076.8**	**1,022.3**	**54.5**

**RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY HIGHER EDUCATION ORGANISATIONS, AUSTRALIA
HUMAN RESOURCES DEVOTED TO R&D BY SOCIO-ECONOMIC OBJECTIVE**

	Person years of effort on R&D								
	1984			*1986r*			*1988*		
Socio-economic objective	*Total*	*Univer-sities*	*CAEs*	*Total*	*Univer-sities*	*CAEs*	*Total*	*Univer-sities*	*CAEs*
National security (Defence)	*29*	*28*	*1*	*52*	*39*	*13*	*42*	*36*	*6*
Economic development—									
Agriculture	1,922	1,863	59	2,012	1,949	63	2,174	2,045	129
Forestry and fisheries	282	265	17	256	237	19	260	224	35
Mining (prospecting)									
Energy sources	71	56	15	112	95	17	105	85	20
Other	108	96	12	206	194	12	163	131	32
Mining (extraction)									
Energy sources	34	33	1	40	37	2	75	63	12
Other	128	110	18	194	156	38	213	163	51
Manufacturing	625	522	103	896	682	215	1,233	949	284
Construction	225	210	15	226	201	25	269	233	36
Energy	769	706	64	719	643	76	695	602	93
Transport	129	108	22	137	109	28	116	97	19
Communications	196	175	21	258	200	58	245	196	49
Economic services n.e.c.	443	399	45	805	700	105	989	853	136
Total economic development	*4,933*	*4,542*	*391*	*5,861*	*5,202*	*659*	*6,536*	*5,640*	*896*
Community welfare—									
Urban and regional planning	116	107	9	150	134	16	144	119	25
Environment	422	377	45	493	427	66	646	554	92
Health	4,140	3,902	238	4,809	4,526	283	5,221	4,894	327
Education	891	767	124	984	843	140	1,062	824	239
Welfare	245	232	13	269	229	41	199	171	29
Community services n.e.c.	337	304	33	454	379	76	463	401	62
Total community welfare	*6,151*	*5,688*	*462*	*7,159*	*6,538*	*621*	*7,735*	*6,962*	*773*
Advancement of knowledge—									
Earth, ocean and atmosphere n.e.c.	1,135	1,097	38	1,207	1,181	26	1,076	1,036	40
General advancement of knowledge	8,597	8,458	139	8,939	8,730	210	9,514	9,265	249
Total advancement of knowledge	*9,732*	*9,556*	*176*	*10,147*	*9,911*	*236*	*10,590*	*10,301*	*289*
Total	**20,844**	**19,814**	**1,030**	**23,218**	**21,690**	**1,529**	**24,902**	**22,939**	**1,963**

Private non-profit sector

The estimate of expenditure on R&D carried out by private non-profit organisations during 1984–85, 1986–87 and 1988–89 are shown in the next table at *current* prices. At average 1984–85 prices, R&D expenditure is estimated to have increased by 8.7 per cent and dropped by 2.9 per cent over 1984–85 and 1986–87 respectively.

RESEARCH AND EXPERIMENTAL DEVELOPMENT CARRIED OUT BY PRIVATE NON-PROFIT ORGANISATIONS, AUSTRALIA
DETAILS OF RESOURCES DEVOTED TO R&D BY SOCIO-ECONOMIC OBJECTIVE

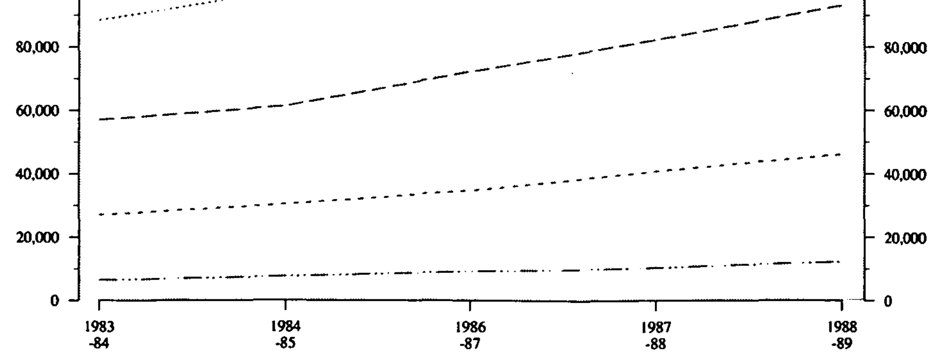
	Expenditure ($'000)			*Person years of effort on R&D*		
Socio-economic objective	*1984–85r*	*1986–87r*	*1988–89*	*1984–85r*	*1986–87r*	*1988–89*
National security (Defence)	—	—	—	—	—	—
Economic development—						
Agriculture	55	69	179	2	3	4
Forestry and fisheries	—	35	—	—	1	—
Mining (prospecting)						
Energy sources	—	—	—	—	—	—
Other	158	—	—	1	—	—
Mining (extraction)						
Energy sources	—	—	—	—	—	—
Other	—	—	—	—	—	—
Manufacturing	—	3,767	5,053	—	49	69
Construction	159	—	—	2	—	—
Energy	535	305	288	8	4	4
Transport	427	52	—	8	1	—
Communications	3	—	16	1	—	1
Economic services n.e.c.	780	1,683	2,554	18	31	30
Total economic development	*2,116*	*5,911*	*8,090*	*41*	*90*	*106*
Community welfare—						
Urban and regional planning	397	38	38	6	—	1
Environment	4	564	411	—	16	8
Health	38,801	43,496	44,658	615	833	891
Education	1,228	1,200	1,302	24	20	22
Welfare	558	882	748	16	23	16
Community services n.e.c.	88	170	787	2	4	11
Total community welfare	*41,075*	*46,351*	*47,944*	*662*	*896*	*949*
Advancement of knowledge—						
Earth, ocean and atmosphere n.e.c.	45	48	48	1	2	2
General advancement of knowledge	251	499	607	8	9	11
Total advancement of knowledge	*296*	*547*	*655*	*9*	*11*	*13*
Total	**43,488**	**52,809**	**56,688**	**712**	**997**	**1,068**

Statistics on manufacturing industry technology

The level of technological development in manufacturing industry can be viewed by classifying industries to high, medium and low technology according to the intensity of their R&D effort. Using the OECD classification by this method, high technology industries are defined as those manufacturing establishments classified to aircraft (Australian Standard Industrial Classification (ASIC) Class 3244); communications and other electronic equipment (ASIC Classes 3351 and 3352); electrical appliances and machinery (ASIC Classes 3353–3357); pharmaceutical and veterinary products (ASIC Class 2763); and photographic, professional and scientific equipment (ASIC Group 334). Medium technology covers chemicals (apart from ASIC Class 2763); petroleum and coal products; non-ferrous metals and basic products; motor vehicles and parts, railway equipment and other transport equipment (ASIC Class 3245); industrial machinery; rubber and plastic products; and, other manufacturing (ASIC Group 348). Low technology covers food, beverages and tobacco; textiles, clothing and footwear; wood and wood products; paper and paper products, etc.; petroleum refining; non-metallic mineral products, basic iron and steel products; fabricated metal products; ships and boats; and, leather products.

The figure below shows that high technology industries as a group showed current price growth in turnover from 1987–88 to 1988–89 of 17 per cent. Low and medium technology groups have performed comparably with a growth of 13 per cent each. In constant prices terms, total manufacturing industry turnover has grown 20 per cent over the five year period and seven per cent between 1987–88 and 1988–89.

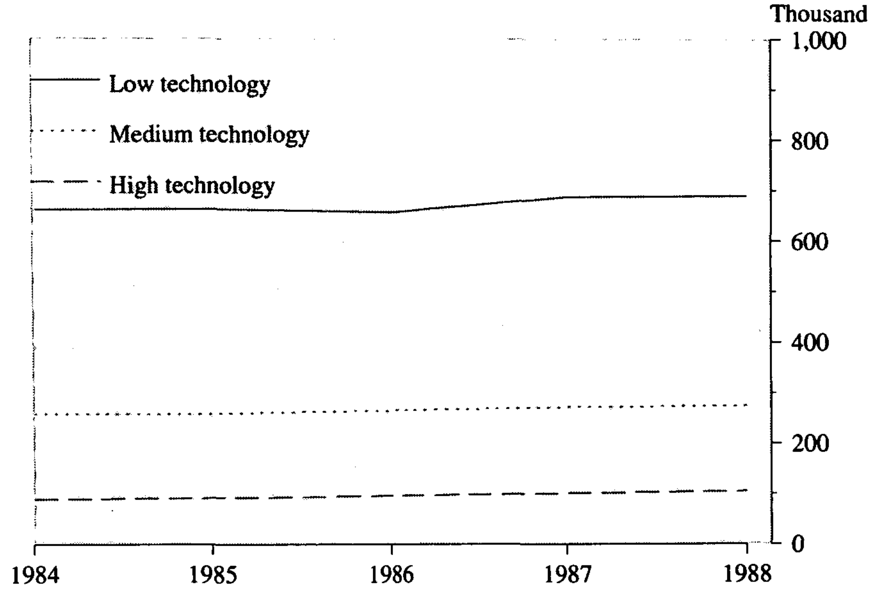
MANUFACTURING ESTABLISHMENTS, AUSTRALIA
Turnover at Current and Constant Prices



Indicates break in series. No census conducted in 1985-86.

The following figure shows manufacturing industry employment levels have grown slightly in the three categories over the five years. Data for the latest year available show rises between 30 June 1988 and 30 June 1989 for high, medium and low technology industries (1.8 per cent, 6.0 per cent and 3.4 per cent respectively).

MANUFACTURING ESTABLISHMENTS, AUSTRALIA
Persons Employed at 30 June



Indicates break in series. No census conducted in 1985-86.

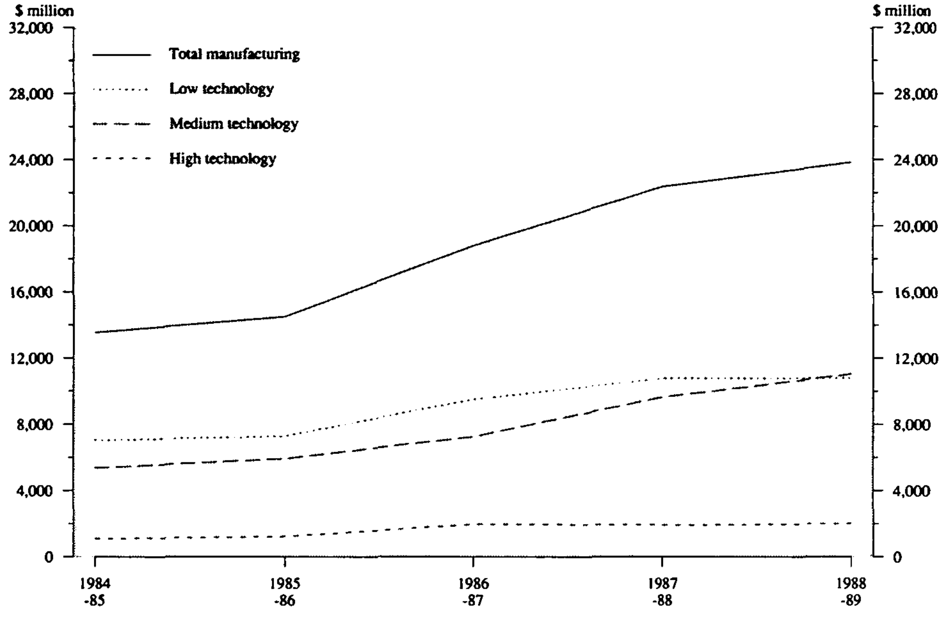
Trade statistics

Another way of viewing Australian manufacturing industry's level of technological development is to look at trade of high technology products. Products are classified initially according to commodity (Australian Import and Export Commodity Codes) but converted to an ASIC basis. Definitions of high, medium and low technology groups according to ASIC are the same as above.

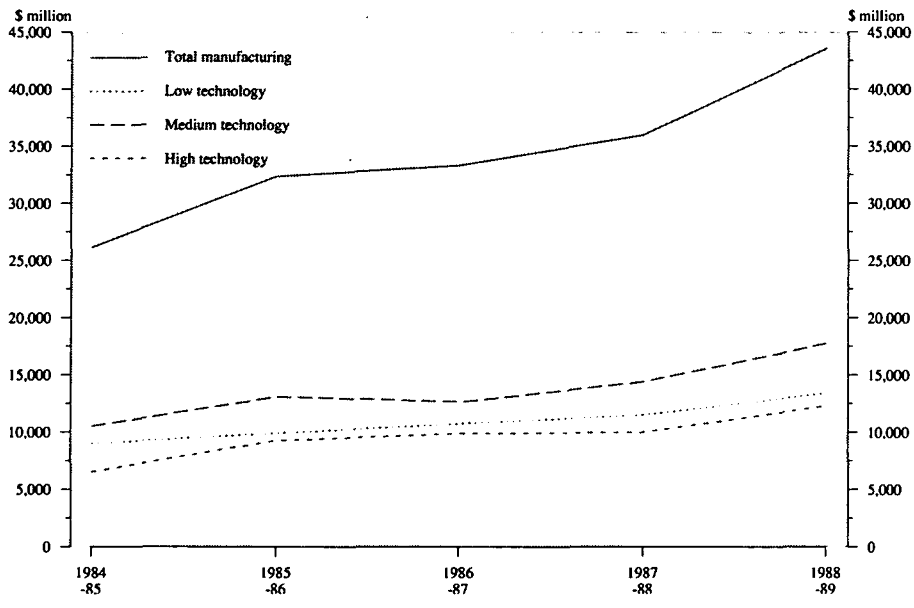
The current price value of exports of Australian manufactures has increased by six per cent for high technology products and 14 per cent for medium technology products between 1987–88 and 1988–89. Exports of low technology products remained at the same level for this period.

The current price value of imports of Australian manufactures has increased at a higher level for each of the three categories between 1987–88 and 1988–89 (23 per cent for both high and medium technology products and 17 per cent for low technology products).

EXPORTS OF MANUFACTURES, AUSTRALIA



IMPORTS OF MANUFACTURES, AUSTRALIA



Other Activities

For information on other activities related to science and technology, *see Year Book* No. 70. That edition contains information on scientific and technological information services (page 640), social science and humanities research (page 652) and international activities (page 653).

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 Industry, Technology and Commerce, the CSIRO, the Australian Nuclear Science and Technology Organisation, the Department of Defence, and in the annual *Science and Technology Statements.* Statistical information on R&D for the years 1968–69, 1973–74 and 1976–77 may be found in the reports on Project SCORE published by the (then) Department of Science. Statistical information on R&D relating to 1978–79, 1981-82, 1984–85, 1985–86 and 1986–87 may be obtained from the Australian Bureau of Statistics (ABS). Further statistical information on higher education is obtainable from the Department of Employment, Education and Training. Trade and industry operations data are available from the ABS.

The Department of Industry, Technology and Commerce's *Australian Science and Technology Indicators Report*, published in 1988, uses S&T indicators to give a good overview and analysis of science and technology information in Australia. It presents information on R&D effort and expenditure, science and technology workforce, S&T information resources, scientific equipment and facilities, literature-based S&T measures, patent activity, technology training, financial support for technological development, industry operations and trade by level of technology, and transfer of technical knowledge.

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23

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 cooperative 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 $5, $10, $20, $50 and $100 and coins in the denominations of 1c, 2c, 5c, 10c, 20c, 50c, $1 and $2. The $1 and $2 notes were replaced by coins in 1984 and 1988 respectively.

AUSTRALIAN NOTES ON ISSUE
($ million)

	Last Wednesday in June—					
	1984	*1985*	*1986*	*1987*	*1988*	*1989*
$1	58.2	45.1	43.7	41.6	39.9	38.1
$2	168.6	179.1	179.9	178.7	162.0	57.4
$5	183.1	192.1	202.2	213.0	225.4	236.7
$10	512.9	518.1	524.8	527.6	565.7	630.2
$20	2,235.6	2,284.9	2,285.2	2,315.7	2,435.4	2,478.3
$50	3,450.4	3,420.5	3,461.7	3,586.2	3,859.7	3,991.6
$100	595.6	1,542.4	2,238.6	2,974.8	3,922.6	4,766.7
Total	**7,204.5**	**8,182.1**	**8,936.1**	**9,837.6**	**11,210.6**	**12,198.9**
Held by banks	*786.7*	*833.3*	*894.3*	*937.4*	*933.9*	*995.8*
Held by public	*6,417.8*	*7,348.8*	*8,041.9*	*8,900.2*	*10,276.7*	*11,203.1*

AUSTRALIAN DECIMAL COIN: NET ISSUES BY RESERVE BANK
($ million)

	Year ended June					
	1984	*1985*	*1986*	*1987*	*1988*	*1989*
1c	1.0	1.1	1.3	1.3	1.4	1.2
2c	1.4	1.5	1.3	1.9	2.1	1.3
5c	3.5	2.7	3.8	4.6	5.5	2.7
10c	5.2	—	3.4	4.8	5.7	2.9
20c	6.9	-9.6	3.0	2.7	5.4	-6.4
50c	9.4	1.2	-0.5	3.2	5.8	-3.4
$1	107.2	86.6	25.5	16.3	21.7	-26.3
$2	—	—	—	—	62.7	239.6
Total	**134.6**	**83.5**	**37.8**	**34.7**	**110.4**	**211.5**

Volume of money

Statistics of the volume of money in the following table include notes and coins in the hands of the public and deposits with banks (including the Reserve Bank). 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
($ million)
(*Source*: Reserve Bank of Australia)

Average of weekly figures for June	*Notes and coins in the hands of public*	*Current deposits with banks (a)*	*Other deposits with banks (a)*			*Total volume of money (b)*
			Certificates of deposit	*Term*	*Other*	
1985	8,009	15,595	5,688	27,346	33,549	90,113
1986	8,717	16,509	6,002	38,489	32,337	101,866
1987	9,598	19,418	5,704	43,017	37,398	114,896
1988	10,978	23,777	6,368	44,260	45,197	130,163
1989	12,193	28,120	21,052	63,507	41,635	166,506
1990	12,840	29,058	22,864	75,628	50,020	190,410

(a) Excludes deposits of the Commonwealth and State Governments and inter-bank deposits. (b) It is not possible to exclude government deposits with those banks formerly classified as savings banks from the components prior to January 1989. As a result, theses components do not sum to the total before this date.

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'. 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. 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 coordination 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, eighteen new private banks have been granted licences to commence operations.

In January 1990, significant amendments were made to the Banking Act further restructuring the banking industry. 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; the *Insurance Act 1973* generally regulating general (non-life) insurance business in Australia and the *Insurance (Agents and Brokers) Act 1984*. 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 financial 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.

Insurance (Agents and Brokers) Act 1984
The prime objective of the Act is to regulate the activities of insurance agents and brokers with a view to strengthening the financial stability of the industry overall. The Act received Royal Assent on 25 June 1984 although most of its regulatory provisions did not become operative until 1 January 1986.

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 cooperative 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, Cooperative Housing Societies and Credit Cooperatives.

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*. Following a determination by the Board under the Reserve Bank Act, the Treasurer directed that remaining capital and reserves of the Rural Credits Department be apportioned between the Reserve Bank Reserve Fund and the Commonwealth. The transfers were made on 22 July 1988.

RESERVE BANK OF AUSTRALIA: LIABILITIES AND ASSETS
(*Source:* Reserve Bank of Australia)
($ million)

LIABILITIES

				Deposits by banks(a)			
30 June—	*Capital and reserve funds*	*Special reserve—IMF special drawing right*	*Australian notes on issue*	*Non-callable deposits/Statutory Reserve Deposit accounts*	*Other*	*All other liabilities*	*Total*
1985	109	351	8,141	2,861	11	4,047	20,886
1986	182	349	8,890	3,301	76	4,841	23,004
1987	200	366	9,801	3,455	18	6,613	26,541
1988	247	324	11,135	3,557	283	4,724	25,853
1989	248	295	12,159	3,178	159	3,840	24,636
1990	248	265	12,837	2,733	921	8,719	25,723

For footnotes *see* end of table.

RESERVE BANK OF AUSTRALIA: LIABILITIES AND ASSETS—*continued*
(*Source:* Reserve Bank of Australia)
($ million)

ASSETS

30 June—	Gold and foreign exchange (b)	Commonwealth government securities (c)	Loans, advances and bills discounted	All other assets	Total
1985	13,629	6,158	400	1,229	20,886
1986	12,016	9,732	215	1,289	23,004
1987	17,120	8,296	110	1,117	26,541
1988	19,644	4,975	130	786	25,853
1989	19,950	3,797	86	613	24,636
1990	22,086	2,874	85	678	25,723

(a) Arrangements for trading and savings banks to hold non-callable deposits with the Reserve Bank were established in September 1988. The arrangements also involved the repayment of Statutory Reserve Deposits previously lodged by trading banks. Associated with this change, the Bank's balance sheet no longer differentiates between trading and savings banks in respect of 'other' deposits by banks. *(b)* Includes currency at short call and International Monetary Fund drawing rights. *(c)* Includes Treasury bills and Treasury notes.

Branches and agencies

At 30 June 1990, banks operated 6,575 branches and 8,072 agencies. Of the total branches, 3,796 were located in metropolitan areas. Banking facilities were also available at 3,756 metropolitan agencies throughout Australia.

INTEREST RATES AT 30 JUNE 1990
(*Source:* Reserve Bank of Australia)

	Per cent per annum
Fixed deposits (Less than $50,000)	
30 days	13.25
3 months	14.00
6 months	14.00
12 months	14.25
Overdrafts	
Less than $100,000	18.75/21.50
$100,000 and over	18.25/18.75

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.

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 re-financing 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.

OTHER FINANCIAL INSTITUTIONS

The statistics provided in the following tables have been compiled from returns supplied annually to the Australian Bureau of Statistics under the *Census and Statistics Act 1905*. The first table displays summary data on the assets and liabilities of each type of financial corporation covered by these statistics. Ensuing tables give more detail dissections of the assets, liabilities, income and expenditure of each category of corporation.

FINANCIAL CORPORATIONS, AUSTRALIA: ASSETS AND LIABILITIES(a)
($ million)

ASSETS AS AT 30 JUNE 1989

Category	*Amount owing on loans*	*Cash placements and deposits*	*Bills, bonds and other securities*	*Other assets*	*Total assets*
Permanent building societies	17,925.1	1,447.4	3,766.1	859.8	23,998.3
Cooperative housing societies	2,205.8	72.4	—	5.4	2,283.5
Credit cooperatives	6,273.8	739.2	297.9	349.7	7,660.6
Authorised money market dealers	0.8	179.2	2,753.2	17.3	2,950.5
Money market corporations	20,901.9	11,208.8	14,024.0	3,922.9	50,057.6
Finance companies	21,307.1	922.4	1,334.8	9,649.8	33,214.2
General financiers	3,743.0	828.6	1,166.9	2,987.5	8,726.2
Other financial corporations	138.4	354.6	205.2	28.6	726.8
Total	**72,495.9**	**15,752.6**	**23,548.1**	**17,821.0**	**129,617.7**

LIABILITIES AS AT 30 JUNE 1989

Category	*Share capital and reserves*	*Borrowings*	*Other liabilities*	*Total liabilities*
Permanent building societies	7,209.8	16,382.3	406.2	23,998.3
Cooperative housing societies	33.0	2,239.4	11.2	2,283.5
Credit cooperatives	534.6	7,045.5	80.4	7,660.6
Authorised money market dealers	85.7	2,828.5	36.8	2,950.5
Money market corporations	2,963.9	44,317.5	2,776.2	50,057.6
Finance companies	3,210.3	28,193.2	1,810.6	33,214.2
General financiers	609.1	7,751.2	365.6	8,726.2
Other financial corporations	12.3	692.1	22.4	726.8
Total	**14,658.7**	**109,449.7**	**5,509.4**	**129,617.7**

(a) At the balance date of corporations within the year shown.

Permanent Building Societies

A permanent building society is defined as an organisation that:

- is registered under relevant State or Territory legislation;

- has not by its rules any fixed date or certain event or result when it is to terminate;
- is authorised to accept money on deposit; and
- operates on a cooperative 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 55 permanent building societies balancing in the 1988–89 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 in chapter 20, *Housing and Construction* and in the monthly publication *Housing Finance for Owner Occupation, Australia* (5609.0).

PERMANENT BUILDING SOCIETIES: ASSETS, LIABILITIES, INCOME AND EXPENDITURE(a), AUSTRALIA
($ million)

	1986–87	1987–88	1988–89
Liabilities—			
Share Capital	10,899.6	8,209.1	6,357.7
Reserves	614.4	727.3	852.1
Deposits	6,965.2	11,188.6	14,556.6
Loans	1,395.6	1,242.5	1,825.7
Other liabilities	207.8	312.2	406.2
Total liabilities	**20,082.7**	**21,679.7**	**23,998.3**
Assets—			
Amount owing on loans	14,160.5	14,717.2	17,925.1
Cash on hand	52.7	61.4	78.4
Deposits with:			
Banks	765.0	790.6	1,138.5
Other	342.6	458.1	230.5
Bills, bonds, etc	4,098.8	4,921.9	3,766.1
Physical assets	518.5	578.4	670.1
Other assets	144.6	152.1	189.7
Total assets	**20,082.7**	**21,679.7**	**23,998.3**
Expenditure—			
Interest on:			
Shares	1,218.6	871.9	618.2
Deposits	1,005.8	1,125.2	1,570.4
Interest on loans	138.6	109.2	160.0
Wages and salaries	178.3	190.9	221.9
Administrative expenses	260.7	272.2	233.9
Other expenditure	177.3	212.1	201.4
Total expenditure	**2,979.3**	**2,781.4**	**3,005.8**
Income—			
Interest from:			
Loans	2,242.0	2,085.2	2,343.5
Deposits	160.1	138.9	130.1
Income from bills, bonds, etc	561.3	591.0	556.4
Other income	124.6	220.5	218.2
Total income	**3,088.0**	**3,035.7**	**3,248.2**

(a) At the balance dates of societies within the financial year shown.

Cooperative Housing Societies

A cooperative housing society is defined as an organisation that:

- is registered under the relevant State or Territory legislation;
- is not authorised to accept money on deposit;
- is only allowed to raise money on loans;
- only provides finance to its members in the form of housing loans; and
- 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 1,907 cooperative housing societies balancing within the 1988–89 financial year. More detailed descriptions and dissections of these statistics may be found in the annual publication *Cooperative Housing Societies: Assets, Liabilities, Income and Expenditure, Australia* (5633.0).

COOPERATIVE HOUSING SOCIETIES: ASSETS, LIABILITIES, INCOME AND EXPENDITURE(a) AUSTRALIA
($ million)

	1986–87	*1987–88*	*1988–89*
Liabilities—			
Share capital and reserves	26.6	29.5	33.0
Borrowings	1,984.9	2,084.7	2,239.4
Other liabilities	13.4	15.3	11.2
Total liabilities	**2,025.0**	**2,129.4**	**2,283.5**
Assets—			
Loan outstanding	1,965.6	2,067.5	2,205.8
Placements and deposits	55.0	57.6	72.4
Physical assets	0.4	0.5	0.7
Other assets	4.0	3.8	4.7
Total assets	**2,025.0**	**2,129.4**	**2,283.5**
Expenditure—			
Interest paid	203.9	223.9	247.5
Administrative expenses	14.5	15.9	19.0
Other expenditure	4.7	5.5	7.4
Total expenditure	**223.1**	**245.4**	**273.8**
Income—			
Interest on loans	208.4	229.8	253.4
Other income	19.2	21.5	26.6
Total income	**227.6**	**251.3**	**280.0**

(a) At the balance dates of cooperative housing societies within the financial year shown.

Credit Cooperatives

A credit cooperative (or credit union) is defined as an organisation that:

- is registered under relevant State or Territory legislation; and
- operates on a cooperative basis by predominantly borrowing from and providing finance to its own members.

Credit cooperative annual financial account statistics were first collected on a national basis from all registered credit cooperatives for the year 1974–75 when there were 738 credit cooperatives with a total of 909,547 members. The number of credit cooperatives operating in 1988–89 was 403 with 2,546,694 members. Comprehensive financial account statistics are provided in the annual publication *Credit Co–operatives: Assets, Liabilities, Income and Expenditure, Australia* (5618.0).

CREDIT COOPERATIVES: ASSETS, LIABILITIES, INCOME AND EXPENDITURE(a), AUSTRALIA
($ million)

	1986–87	*1987–88*	*1988–89*
Liabilities—			
Share capital	21.6	26.2	27.4
Reserves	317.1	404.1	507.2
Deposits	6,819.1	6,708.9	6,871.1
Loans	103.5	93.1	174.4
Other liabilities	67.4	68.0	80.4
Total liabilities	**7,328.9**	**7,300.3**	**7,660.6**
Assets—			
Amount owing on loans*(b)*	5,910.3	5,581.2	6,273.8
Cash on hand	39.1	42.2	48.9
Deposits with:			
Banks	131.6	145.3	111.8
Other	644.5	793.5	578.5
Bills, bonds, etc	270.5	410.0	297.9
Physical assets	246.7	232.2	250.9
Other assets	86.1	95.2	98.8
Total assets	**7,328.9**	**7,300.3**	**7,660.6**
Expenditure—			
Interest on:			
Deposits	790.5	707.0	698.1
Loans	9.8	5.5	13.1
Wages and salaries	127.0	135.2	164.6
Administrative expenses	126.0	136.2	182.0
Other expenditure	138.6	144.6	114.4
Total expenditure	**1,191.8**	**1,128.4**	**1,172.1**
Income—			
Interest from:			
Loans	1,023.3	994.0	1,041.1
Deposits	111.9	103.0	109.1
Income from bills, bonds, etc	41.1	45.5	49.5
Other income	40.0	63.9	78.5
Total income	**1,216.3**	**1,206.5**	**1,278.1**

(a) At the balance of credit cooperatives within the financial year shown. *(b)* Net of unearned interest and allowance for doubtful debts.

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 eight authorised money market dealers. 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.

They are required by the Reserve Bank to:

- 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;
- at all times be willing traders in the buying and selling of approved securities;
- have a minimum paid-up capital of $400,000 and adhere to a maximum limit on the ratio of loans to shareholders' funds; and
- 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.

The following table contains details of assets, liabilities, income and expenditure of authorised money market dealers collected annually under the *Census and Statistics Act 1905* and first published for 1984–85.

AUTHORISED MONEY MARKET DEALERS: ASSETS, LIABILITIES, INCOME AND EXPENDITURE(a), AUSTRALIA
($ million)

	1986–87	*1987–88*	*1988–89*
Liabilities—			
Paid up capital	68.2	73.2	61.8
Reserves	11.4	11.4	17.4
Accumulated surplus (net)	2.4	14.7	6.5
Subordinated loans	—	2.0	—
Borrowings from residents—			
Banks	1,618.6	2,901.5	2,399.5
Other financial institutions	283.9	172.5	175.1
Government and public authorities	150.7	301.2	16.7
Other	503.7	378.2	236.2
Borrowings from non-residents	1.0	—	1.0
Other liabilities	12.6	29.9	36.8
Total liabilities	**2,652.4**	**3,884.6**	**2,950.5**
Assets—			
Amount owing on loans	1.9	1.0	0.8
Cash and bank deposits	121.3	145.3	80.9
Other placements and deposits	77.3	1.0	98.3
Bills, bonds and other securities	2,430.4	3,722.2	2,753.2
Other financial assets	20.6	13.9	16.2
Other assets	1.0	1.3	1.1
Total assets	**2,652.4**	**3,884.6**	**2,950.5**
Expenditure—			
Interest on borrowings	330.8	354.9	522.9
Wages and salaries	3.7	4.6	2.0
Administrative expenses	16.6	17.9	15.9
Other expenditure	2.1	8.2	3.8
Total expenditure	**353.2**	**385.7**	**544.5**
Income—			
Interest on loans	1.7	21.7	39.9
Income from placements and other deposits	29.0	44.1	129.1
Income from holdings of:			
Government and public authority securities	227.5	216.3	276.0
Other securities	91.3	110.6	54.9
Other income	3.9	17.0	53.8
Total income	**353.3**	**409.6**	**553.7**

(a) At the balance dates of companies within the financial year shown. Included are only those corporations registered under the *Financial Corporations Act 1974* and categorised as authorised money market dealers during the reference periods.

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.

The following table contains details of assets, liabilities, income and expenditure of money market dealers collected annually under the *Census and Statistics Act 1905* and first published for 1984–85.

MONEY MARKET CORPORATIONS: ASSETS, LIABILITIES, INCOME AND EXPENDITURE(a), AUSTRALIA
($ million)

	1986–87	*1987–88*	*1988–89*
Liabilities—			
Paid up capital	1,656.0	2,077.8	2,468.5
Reserves	310.7	501.8	402.5
Accumulated surplus (net)	342.8	408.9	92.9
Subordinated loans	161.0	166.4	186.8
Borrowings from residents—			
By issue of securities	2,800.4	2,823.1	3,928.8
Banks	1,942.8	3,333.4	5,689.8
Other financial institutions	2,435.5	3,298.0	3,315.5
Other	16,913.0	19,826.3	19,644.9
Borrowings from non-residents	7,036.8	9,673.4	11,551.7
Other liabilities	1,158.0	1,636.4	2,776.2
Total liabilities	**34,756.9**	**43,745.6**	**50,057.6**
Assets—			
Amount owing on loans	14,553.7	18,588.8	20,901.9
Finance lease receivables	862.9	1,166.1	1,517.0
Cash and bank deposits	1,436.2	1,156.2	1,460.5
Other placements and deposits	5,434.9	7,844.8	9,748.3
Bills, bonds and other securities	10,296.7	12,906.0	14,024.0
Other financial assets	968.8	1,169.6	1,632.0
Other assets	1,203.7	914.1	773.9
Total assets	**34,756.9**	**43,745.6**	**50,057.6**
Expenditure—			
Interest on borrowings	4,416.3	5,409.8	5,800.9
Wages and salaries	210.1	294.7	325.7
Administrative expenses	186.3	280.3	375.5
Other expenditure	385.5	804.3	1,237.2
Total expenditure	**5,198.2**	**6,789.1**	**7,739.3**
Income—			
Interest on loans	1,960.6	2,621.4	2,947.8
Income from finance leasing	125.3	249.4	208.6
Income from placements and other deposits	1,240.0	1,279.1	1,499.1
Income from bills, bonds, etc	1,536.9	1,940.0	1,749.9
Other income	688.8	1,195.3	1,194.0
Total income	**5,551.6**	**7,285.2**	**7,599.4**

(a) At the balance dates of companies within the financial year shown. Included are only those corporations registered under the *Financial Corporations Act 1974* and categorised as authorised money market dealers during the reference periods.

More detailed descriptions and dissections of the statistics of authorised money market dealers and money market corporations statistics may be found in the annual publication *Authorised Dealers and Money Market Corporations: Assets, Liabilities, Income and Expenditure, Australia* (5650.0).

Finance Companies

Collection of statistics on the financial accounts of finance companies registered under the *Financial Corporations Act 1974* commenced for the 1984–85 year under the authority of the *Census and Statistics Act 1905*. Finance companies are defined as corporations which rely substantially on borrowing 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.

FINANCE COMPANIES: ASSETS, LIABILITIES, INCOME AND EXPENDITURE(a), AUSTRALIA
($ million)

	1986–87	*1987–88*	*1988–89*
Liabilities—			
Paid up capital	1,695.9	1,659.1	1,501.5
Reserves	641.3	655.6	662.0
Accumulated surplus (net)	730.4	826.1	1,046.8
Subordinated loans	95.1	90.5	100.4
Borrowings from residents—			
By issue of securities	15,454.0	15,216.2	15,793.4
Banks	1,201.0	1,754.8	1,870.6
Other	6,248.2	6,046.7	8,645.4
Borrowings from non-residents	1,947.7	2,030.8	1,783.4
Other liabilities	1,498.3	1,842.0	1,810.6
Total liabilities	**29,511.9**	**30,121.9**	**33,214.2**
Assets—			
Amount owing on loans	18,199.1	17,637.2	21,307.1
Finance lease receivables	8,399.7	8,355.0	8,705.7
Cash and bank deposits	100.4	217.5	119.4
Other placements and deposits	953.8	1,394.4	803.0
Bills, bonds and other securities	896.5	1,497.3	1,334.8
Other financial assets	520.8	573.4	496.7
Other assets	441.6	447.0	447.4
Total assets	**29,511.9**	**30,121.9**	**33,214.2**
Expenditure—			
Interest on borrowings	3,586.6	3,382.9	3,402.8
Wages and salaries	313.9	342.2	359.5
Administrative expenses	362.8	373.5	416.5
Other expenditure	595.3	712.8	588.9
Total expenditure	**4,858.7**	**4,811.3**	**4,767.7**
Income—			
Interest on loans	3,121.7	3,264.5	3,406.6
Income from finance leasing	1,465.9	1,378.9	1,374.8
Income from placements and deposits	174.6	178.8	144.1
Income from bills, bonds, etc	256.0	186.0	182.1
Other income	215.0	280.5	317.1
Total income	**5,233.3**	**5,288.6**	**5,424.8**

(a) At the balance dates of companies within the financial year shown. Included are only those corporations registered under the *Financial Corporations Act 1974* and categorised as finance companies during the reference periods.

More detailed descriptions and dissections of finance company statistics may be found in the annual publication *Finance Companies: Assets, Liabilities, Income and Expenditure, Australia* (5616.0).

General Financiers

Collection of statistics on the financial accounts of general financiers registered under the *Financial Corporations Act 1974* commenced for the 1984–85 year under the authority of the *Census and Statistics Act 1905*. General financiers are defined as corporations which lend predominantly for business and commercial purposes, instalment credit finance retail sales of others and/or other loans to individuals but which do not rely substantially on borrowings in financial markets in Australia and from abroad.

GENERAL FINANCIERS: ASSETS, LIABILITIES, INCOME AND EXPENDITURE, AUSTRALIA(a)
($ million)

	1986–87	*1987–88*	*1988–89*
Liabilities—			
Paid up capital	366.9	453.9	421.4
Reserves	147.2	107.6	119.0
Accumulated surplus (net)	62.4	-1.0	68.7
Subordinated loans	63.1	166.3	95.9
Borrowings from residents—			
By issue of securities	43.1	45.1	85.8
Banks	1,445.1	1,795.7	1,671.4
Other financial institutions	457.0	774.1	661.2
Other	2,912.2	3,551.6	4,002.6
Borrowings from non-residents	613.1	579.2	1,234.3
Other liabilities	242.6	217.0	365.6
Total liabilities	**6,352.7**	**7,689.6**	**8,726.2**
Assets—			
Amount owing on loans	3,265.5	3,626.2	3,743.0
Finance lease receivables	1,294.2	2,070.1	2,359.4
Cash and bank deposits	133.0	180.5	298.8
Other placements and deposits	269.0	491.0	529.8
Bills, bonds and other securities	991.5	926.2	1,166.9
Other financial assets	143.7	146.0	179.0
Other assets	255.7	249.6	449.1
Total assets	**6,352.7**	**7,689.6**	**8,726.2**
Expenditure—			
Interest on borrowings	631.2	778.7	940.4
Wages and salaries	45.3	48.2	48.7
Administrative expenses	69.8	68.4	76.3
Other expenditure	192.5	160.9	153.5
Total expenditure	**938.8**	**1,056.2**	**1,218.9**
Income—			
Interest on loans	491.0	521.0	550.4
Income from finance leasing	241.5	287.0	328.6
Income from placements and deposits	44.9	46.9	111.5
Income from bills, bonds, etc	97.0	131.0	141.7
Other income	147.2	94.5	151.4
Total income	**1,021.6**	**1,080.3**	**1,283.6**

(a) At the balance dates of companies within the financial year shown. Included are only those corporations registered under the *Financial Corporations Act 1974* and categorised as general financiers during the reference periods.

More detailed descriptions and dissections of the statistics of general financiers may be found in the annual publication *General Financiers and Other Financial Corporations: Assets, Liabilities, Income and Expenditure, Australia* (5648.0).

Other Financial Corporations

Collection of statistics of the financial accounts of other financial corporations registered under the *Financial Corporations Act* 1974 commenced for the 1984–85 year under the authority of the *Census and Statistics Act 1905*. Other financial corporations are defined as registered corporations that are not categorised as building societies, authorised money market dealers, money market dealers, finance companies, credit cooperatives, pastoral finance companies, general financiers or intra-group financiers.

OTHER FINANCIAL CORPORATIONS: ASSETS, LIABILITIES, INCOME AND EXPENDITURE, AUSTRALIA(a)
($ million)

	1986–87	*1987–88*	*1988–89*
Liabilities—			
Paid up capital	7.0	5.3	5.5
Reserves	3.2	3.8	4.2
Accumulated surplus (net)	1.3	2.0	2.6
Borrowings from residents—			
Banks	6.5	9.8	12.7
Other	414.7	525.3	678.3
Borrowings from non-residents	—	—	1.1
Other liabilities	16.6	23.9	22.4
Total liabilities	**449.3**	**570.1**	**726.8**
Assets—			
Amount owing on loans	53.0	76.1	138.4
Finance lease receivables	0.8	0.6	0.3
Cash and bank deposits	37.4	52.3	88.5
Other placements and deposits	84.0	118.2	266.1
Bills, bonds and other securities	254.0	297.9	205.2
Other financial assets	12.3	17.9	20.6
Other assets	7.7	7.1	8.0
Total assets	**449.3**	**570.1**	**726.8**
Expenditure—			
Interest on borrowings	58.2	55.7	104.6
Wages and salaries	6.2	7.0	6.6
Administrative expenses	4.5	6.0	7.5
Other expenditure	5.7	6.8	7.9
Total expenditure	**74.6**	**75.5**	**126.6**
Income—			
Interest on loans	9.8	8.6	15.3
Income from finance leasing	0.4	0.4	0.4
Income from placements and deposits	21.3	20.5	44.0
Income from bills, bonds, etc	32.0	33.0	50.7
Other income	15.6	15.4	17.4
Total income	**79.1**	**77.9**	**127.8**

(a) At the balance dates of companies within the financial year shown. Included are only those corporations registered under the *Financial Corporations Act 1974* and categorised as other financial corporations during the reference periods.

More detailed descriptions and dissections of the statistics of other financial corporations may be found in the annual publication *General Financiers and Other Financial Corporations: Assets, Liabilities, Income and Expenditure, Australia* (5648.0).

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

June—	Number of trusts	Units in issue at end of period ($ million)	Weighted average net yield at end of period (% per annum)	Assets ($ million): Cash and deposits with banks	All other deposits and loans	Bills of exchange purchased and held	Promissory notes purchased and held	Other assets	Total assets
1988	18	3,625.5	11.17	313.3	470.2	2,483.9	358.9	63.4	3,689.5
1989	19	3,646.1	16.79	667.2	777.0	1,917.0	354.5	35.5	3,749.2
1990	16	4,432.0	14.08	1,476.0	469.3	2,359.5	203.9	38.6	4,547.3

PUBLIC UNIT TRUSTS

A quarterly statistical collection was introduced in September 1985 to obtain information on the operations of listed and unlisted public unit trusts.

A public unit trust is defined as an arrangement (fund) which is governed by a trust deed between a management company and a trustee company; is open to the public within Australia for the purpose of investing the pooled funds of unit holders to yield returns in the form of income and/or capital gains; and allows unit holders to dispose of their units within a relatively short period of time. These statistics exclude cash management trusts, private trusts and trusts exempted from providing redemption facilities (e.g. film and agricultural trusts).

The major distinction between a listed and an unlisted unit trust is that a listed unit trust's units must be listed on Australian Stock Exchanges and adhere to listing requirements similar to those for company shares.

The following table summarises the financial operations of public unit trusts.

UNIT TRUSTS: SUMMARY

Quarter	Number of trusts	Units in issue at end of the period ($ million)	Assets ($ million): Shares	Property at the end of the quarter	Loan outstandings secured by mortgages on land and buildings	Other assets	Total assets
UNLISTED							
1988							
March	362	9,761.4	2,968.0	3,799.7	1,210.9	3,099.5	11,078.1
June	379	10,399.6	2,998.2	4,046.0	1,305.0	3,368.4	11,717.6
Sept.	387	11,260.3	3,091.0	4,439.8	1,576.9	3,219.1	12,326.8
Dec.	392	11,972.7	3,036.6	4,827.3	1,706.9	3,663.7	13,234.5
1989							
March	401	12,506.3	3,064.7	5,178.6	1,877.9	3,710.7	13,831.9
June	393	13,042.1	3,177.7	6,082.0	1,950.7	3,646.9	14,857.3
Sept.	378	13,617.1	3,547.0	6,429.7	1,953.7	3,544.4	15,474.8
Dec.	379	14,108.0	3,553.5	6,872.3	1,949.7	3,695.0	16,070.5
1990							
March	381	14,904.2	3,512.9	6,948.1	1,819.4	4,355.9	16,636.3
LISTED							
1988							
March	56	6,825.9	176.1	4,403.7	25.6	3,423.5	8,028.9
June	57	7,748.6	193.7	4,834.3	25.8	4,398.3	9,452.1
Sept.	55	7,153.2	203.4	4,980.2	18.9	3,704.0	8,906.5
Dec.	54	7,723.3	418.1	5,744.0	0.3	4,207.4	10,369.8
1989							
March	53	7,934.8	423.3	6,054.1	0.2	4,303.4	10,781.0
June	51	7,474.2	391.4	6,254.9	33.0	4,139.0	10,818.3
Sept.	49	7,705.6	448.0	6,369.3	33.0	4,117.1	10,967.4
Dec.	47	7,542.7	483.4	6,474.5	33.0	4,134.9	11,125.8
1990							
March	43	7,431.3	471.0	6,359.9	33.0	4,102.4	10,966.3
TOTAL							
1988							
March	418	16,587.3	3,144.1	8,203.4	1,236.5	6,523.0	19,107.0
June	436	18,148.2	3,191.9	8,880.3	1,330.8	7,766.7	21,169.7
Sept.	442	18,413.5	3,294.4	9,420.0	1,595.8	6,923.1	21,233.3
Dec.	446	19,696.0	3,454.7	10,571.3	1,707.2	7,871.1	23,604.3
1989							
March	454	20,441.1	3,488.0	11,232.7	1,878.1	8,014.1	24,612.9
June	444	20,516.3	3,569.1	12,336.9	1,983.7	7,785.9	25,675.6
Sept.	427	21,322.7	3,995.0	12,799.0	1,986.7	7,661.5	26,442.2
Dec.	426	21,650.7	4,036.9	13,346.8	1,982.7	7,829.9	27,196.3
1990							
March	424	22,335.5	3,983.9	13,308.0	1,852.4	8,458.3	27,602.6

LIFE INSURANCE

Statistics in the following table have been derived from the publications of the Insurance and Superannuation Commission 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 reported by four State Government Insurance Offices.

Information contained in the following table does not relate to uniform accounting periods but to the balance dates of organisations falling within the calendar year shown.

LIFE INSURANCE: SUMMARY

	Insurance and endowment policies			
	Number of policies ('000)	*Sum insured ($ million)*	*Business issued by single premiums ($ million)*	*Annual premiums ($ million)*
ORDINARY AND INDUSTRIAL BUSINESS				
New policies issued—				
1987	927	30,522	3,780.7	396.5
1988	958	37,766	2,654.2	467.7
1989	822	43,530	1,914.7	641.4
Policies discounted or reduced*(a)*—				
1987	712	16,886	..	185.6
1988	733	19,801	..	223.3
1989	798	22,937	..	269.5
Policies existing at end of—				
1987	6,173	134,570	..	1,596.2
1988	6,398	152,535	..	1,840.6
1989	6,422	173,128	..	2,212.5
SUPERANNUATION BUSINESS				
New policies issued—				
1987	343	38,550	1,700.6	3,341.3
1988	353	53,873	2,205.7	4,288.2
1989	460	64,917	2,796.2	5,356.4
Policies discontinued or reduced*(a)*—				
1987	100	19,245	..	491.2
1988	96	24,546	..	564.5
1989	124	27,457	..	823.6
Policies existing at end of—				
1987	1,701	140,027	..	3,341.3
1988	1,958	169,354	..	4,288.2
1989	2,294	206,814	..	5,356.4

(a) Includes transfers.

GENERAL INSURANCE

Statistics in the following tables have been derived from the publications of the Insurance and Superannuation Commission. The statistics relate to the operations of:

(a) bodies corporate authorised to carry on insurance business under the *Insurance Act 1973;* and

(b) government instrumentalities, i.e. State Government Insurance Offices and Commonwealth 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 during the year. 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. Salvage and other amounts recoverable other than reinsurance recoveries have been deducted.

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)

Class of business	*1985–86*	*1986–87*	*1987–1988*	*1988–1989*
	PREMIUMS			
Fire*(a)*	725.7	854.2	917.9	901.6
House Owners' and House-holders'	782.3	826.3	908.1	940.0
Contractors' All Risks	64.6	86.0	86.1	95.9
Marine and Aviation	211.9	240.1	255.8	268.9
Motor Vehicle Comprehensive	1,392.5	1,664.9	1,943.8	2,054.8
Compulsory Third Party (Motor Vehicle)	118.6	132.4	132.6	435.1
Employers Liability*(b)*	1,607.4	1,267.9	411.7	281.1
Public Liability*(c)*	352.9	500.1	621.5	630.9
All other	631.0	703.8	788.9	866.2
Total	**5,886.8**	**6,275.6**	**6,066.4**	**6474.5**
	CLAIMS			
Fire*(a)*	417.7	403.0	375.0	458.0
House Owners' and House-holders'	372.4	409.3	175.0	465.7
Contractors' All Risks	38.6	41.6	87.0	37.7
Marine and Aviation	114.6	125.8	97.3	126.0
Motor Vehicle Comprehensive	1,127.8	1,370.7	370.4	1,549.9
Compulsory Third Party (Motor Vehicle)	64.4	60.8	293.3	68.6
Employers Liability*(b)*	1,332.1	1,308.6	2,493.8	918.8
Public Liability*(c)*	126.4	140.2	853.3	239.9
All other	272.3	325.4	227.3	359.3
Total	**3,866.2**	**4,185.5**	**4,972.4**	**4,223.0**

(a) Includes sprinkler leakage, loss of profits, and crop and hailstone insurance. *(b)* Excludes workers' compensation insurance in the coal mining industry in NSW. *(c)* Includes product liability and professional indemnity insurance.

LENDING BY FINANCIAL INSTITUTIONS

The following is a summary of lending activity of financial institutions. More detail regarding housing finance is contained in chapter 20, *Housing Construction*.

LENDING COMMITMENTS BY FINANCIAL INSTITUTIONS
($ million)

Type of lending activity	*1987–88*	*1988–89*	*1989–90*
Housing finance	20,109.7	22,787.8	18,689.5
Personal finance	19,934.4	22,419.2	22,300.3
Commercial finance	108,180.8	115,140.7	92,821.9
Lease finance	6,789.3	8,801.7	8,215.0
Total	**155,014.2**	**169,149.4**	**142,026.7**

PERSONAL, COMMERCIAL AND LEASE FINANCE

Three 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 following tables present statistics of finance commitments made by significant lenders to individuals for their own personal (non-business) use. For more comprehensive statistics and detailed information on the scope and coverage of these statistics refer to the monthly publication *Personal Finance, Australia* (5642.0).

PERSONAL FINANCE COMMITMENTS(a): TYPE OF LENDER
($ million)

	All banks	*Finance companies*	*Credit cooperatives*	*Other lenders(b)*	*Total*
1987–88	14,406.3	3,242.0	1,844.6	441.4	19,934.4
1988–89	15,420.2	4,407.4	2,188.7	403.0	22,419.3
1989–90	14,815.0	4,800.5	2,215.5	469.3	22,300.3

(a) Includes both fixed loan facilities and new and increased lending commitments under revolving credit facilities. (b) Includes permanent building societies, general financiers and retailers.

PERSONAL FINANCE COMMITMENTS: TYPE OF FACILITY, ALL LENDERS
($ million)

		Revolving credit commitments			
				Credit limits	
	Fixed loan commitments	*New and increased credit limits*	*Cancellations and reductions in credit limits*	*Total*	*Used*
1987–88	11,864.6	8,069.7	3,909.9	21,484.8	9,328.7
1988–89	14,312.1	8,107.1	5,232.1	24,486.6	10,944.0
1989–90	13,761.9	8,538.4	6,110.9	26,834.8	12,208.9

Commercial finance

The statistics in the following tables measure commitments made by significant lenders to government, private and public enterprises and non-profit organisations as well as to individuals (for investment and business purposes). For more comprehensive statistics and detailed information on the scope and coverage of these statistics refer to the monthly publication *Commercial Finance, Australia* (5643.0).

COMMERCIAL FINANCE COMMITMENTS(a): TYPE OF LENDER
($ million)

	Banks	*Finance companies*	*Money market corporations*	*Other lenders(b)*	*Total*
1987–88	89,192.3	8,463.5	10,714.8	150.3	108,520.8
1988–89	91,748.7	13,341.6	9,788.6	261.8	115,140.7
1989–90	75,132.7	10,474.3	5,931.6	1,283.3	92,821.9

(a) Includes both fixed loan facilities and new and increased lending commitments under revolving credit facilities. (b) Includes permanent building societies, general financiers and pastoral finance companies.

COMMERCIAL FINANCE COMMITMENTS: FIXED LOAN FACILITIES
($ million)

	Construction	Purchase of real property	Purchase of plant and equipment	Re-financing	Other purposes	Total
1987–88	5,018.0	8,520.8	2,493.2	4,062.0	14,408.0	34,502.0
1988–89	7,795.6	14,816.1	3,206.0	4,408.8	16,575.7	46,802.2
1989–90	6,276.2	10,346.1	3,454.2	3,584.3	14,424.6	38,085.5

COMMERCIAL FINANCE COMMITMENTS(a): INDUSTRY OF BORROWER
($ million)

	1988–89			1989–90		
Industry of borrower	New fixed loan commitments during period	New and increased credit limits during period	Total new commitments during period	New fixed loan commitments during period	New and increased credit limits during period	Total new commitments during period
Agriculture, forestry, fishing and hunting	3,266.2	3,689.4	6,955.6	1,974.3	3,373.1	5,347.4
Mining	901.7	3,219.1	4,120.8	810.4	2,225.9	3,036.3
Manufacturing	2,717.8	10,221.9	12,939.7	2,151.1	8,657.4	10,808.5
Construction	8,065.7	5,136.5	13,202.2	5,751.4	3,329.8	9,081.2
Wholesale trade	1,713.2	3,466.9	5,180.1	1,511.0	2,833.5	4,344.5
Retail trade	3,110.5	4,724.3	7,834.8	3,560.0	4,888.8	8,448.8
Transport and storage	1,275.3	1,796.3	3,071.6	1,267.1	1,128.8	2,395.9
Finance, investment and insurance	6,664.9	16,024.2	22,689.1	4,574.0	13,742.1	18,316.1
Property and business services	8,673.0	9,852.5	18,525.5	7,449.7	7,025.4	14,475.1
Other industries	10,413.9	10,207.4	20,621.4	9,036.5	7,531.6	16,568.1
Total industries	**46,802.2**	**68,338.5**	**115,140.7**	**38,085.5**	**54,736.4**	**92,821.9**

(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. For more comprehensive statistics and detailed information on the scope and coverage of these statistics refer to the monthly publication *Lease Finance, Australia* (5644.0).

LEASE FINANCE COMMITMENTS: TYPE OF LESSOR
($ million)

	All banks	Money market corporations	Finance companies	General financiers	Total
1987–88	1,825.0	412.5	3,973.6	578.2	6,789.3
1988–89	2,329.6	456.2	5,106.7	909.1	8,801.7
1989–90	2,789.8	411.3	4,064.8	950.9	8,216.7

LEASE FINANCE COMMITMENTS: TYPE OF GOODS LEASED
($ million)

Types of goods	*1987–88*	*1988–89*	*1989–90*
Motor vehicles and other transport equipment	3,502.8	4,845.8	4,041.1
Construction and earth moving equipment	306.2	439.3	402.4
Agricultural machinery and equipment	182.3	243.0	223.9
Automatic data processing equipment and office machinery	841.3	1,138.9	1,369.9
Shop and office furniture, fittings and equipment	652.7	674.9	572.2
Other goods	1,304.1	1,459.7	1,607.3
Total	**6,789.3**	**8,801.7**	**8,216.7**

LEASE FINANCE COMMITMENTS: INDUSTRY OF LESSEE
($ million)

Industry of lessee	*1987–88*	*1988–89*	*1989–90*
Agriculture, forestry, fishing and hunting	438.0	547.5	430.5
Mining	110.2	133.4	193.9
Manufacturing	1,040.7	1,090.5	973.5
Construction	548.3	706.9	590.6
Wholesale trade	305.5	319.7	298.9
Retail trade	838.7	1,119.0	998.2
Transport and storage	901.2	1,204.9	1,242.2
Finance, investment and insurance	537.8	681.5	633.2
Property and business services	907.1	1,273.5	1,145.6
Community services	325.9	430.0	217.8
Other industries	835.9	1,294.8	1,490.3
Total industries	**6,789.3**	**8,801.7**	**8,215.0**

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Personal Finance, Australia (5642.0)
Commercial Finance, Australia (5643.0)
Lease Finance, Australia (5644.0)
Public Unit Trusts, Australia (5645.0)
General Financiers and Other Financial Corporations: Assets, Liabilities, Income and Expenditure, Australia (5648.0)
Authorised Dealers and Money Market Corporations: Assets, Liabilities, Income and Expenditure, Australia (5650.0)

Other Publications

The Reserve Bank of Australia Bulletin

24

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. This is followed by 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, provides definitions of the enterprise unit used for GFS collections and of transactions classifications employed. The GFS classifications used in the tables that follow are:

- 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;
- the *Taxes, Fees and Fines Classification* (TFFC) which dissects this major form of government revenue according to the type of tax, fee or fine collected; and
- 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; and details of the main provisions appeared in further issues of the *Year Book* up to No. 50. For details of current provisions for financial assistance to the States reference should be made to the *Commonwealth Budget Paper No. 4 Commonwealth Financial Relations with Other Levels of Government, 1989–90.*

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 1987–88, the change in cash balances was represented by the following:

	$'000
Net Cash receipts of the Consolidated Revenue Fund	82,668,315
plus cash receipts of Loan Fund	36,911,657
plus cash receipts of Trust Fund	8,628,320
Total	*128,208,292*
less cash payments from Consolidated Revenue Fund	82,668,316
less cash payments from Loan Fund	37,305,240
Less cash payments from Trust Fund (including decrease in investments of the Trust Fund)	9,279,390
Total	*129,252,946*
equals increase in cash balances	-1,044,654

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 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 1989–90 are set out in the table which follows, together with figures for the years 1984–85 to 1988–89. 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.

COMMONWEALTH GENERAL GOVERNMENT BUDGET SECTOR TRANSACTIONS BY ECONOMIC TYPE ($ million)

(*Source:* **Budget Paper No. 1 Budget Statements 1989–90)**

	1984–85	*1985–86*	*1986–87*	*1987–88*	*1988–89*	*1989–90*
Current outlays—						
Final Consumption Expenditure	11,162	12,552	13,601	14,075	14,948	16,029
Current Transfer Payments						
Interest	5,653	7,030	7,936	7,910	7,480	7,384
Subsidies*(a)*	1,651	1,527	1,334	1,461	1,245	1,227
Personal Benefit Payments	20,652	22,339	24,082	26,819	28,353	31,552
Grants to Non-Profit Institutions	871	959	1,108	942	1,086	1,196
Grants to Non-Budget Sector*(a)*	1,675	2,063	2,090	2,382	2,732	2,438
Grants to Other Governments	16,509	17,771	19,330	20,734	21,480	22,694
Grants Overseas	840	840	810	843	916	1,023
Other Transfers	—	—	3	4	5	9
Total Current Transfer Payments	47,851	52,529	56,693	61,095	63,297	67,523
Total current outlays	*59,013*	*65,081*	*70,294*	*75,170*	*78,245*	*83,552*
Capital outlays—						
Gross Capital Formation*(b)*	562	595	534	679	516	582
Net Land and Intangible Assets	–100	–111	–81	–72	–115	92
Capital Transfer Payments						
Grants to Non-Budget Sector	378	503	664	648	305	89
Grants to Other Governments	3,166	3,247	3,250	3,039	3,064	3,467
Grants to Other Sector*(c)*	386	328	303	348	352	420
Total Capital Transfer Payments	3,930	4,078	4,217	4,035	3,721	3,976
Net Advances						
To Non-Budget Sector	–17	–102	–123	–38	29	–290
To Other Governments	799	777	546	–46	–124	–510
To Other Sector*(d)*	128	114	100	77	392	530
Total Net Advances	910	789	523	–7	297	–270
Total capital outlays	*5,302*	*5,351*	*5,193*	*4,635*	*4,419*	*4,380*
Asset Sales	—	—	—	–1,059	–538	–1,200
Contingency Reserve	—	—	—	—	—	20
Total outlays	***64,315***	***70,432***	***75,487***	***78,746***	***82,126***	***86,752***

For footnotes *see* end of table.

COMMONWEALTH GENERAL GOVERNMENT BUDGET SECTOR TRANSACTIONS BY ECONOMIC TYPE ($ million)—*continued*

(*Source:* **Budget Paper No. 1 Budget Statements 1989–90**)

	1984–85	*1985–86*	*1986–87*	*1987–88*	*1988–89*	*1989–90*
Revenue—						
Taxation—						
Income tax on companies	5,968	6,674	7,888	10,348	11,992	13,330
Income tax on persons	29,302	32,734	38,074	41,886	47,543	52,205
Sales tax, customs and excise duties	16,507	18,272	18,920	20,898	21,808	23,846
Tax on certain bank transactions	189	202	261	330	358	390
ACT taxes and charges	120	143	177	239	233	—
Other taxes, fees and fines—						
Primary industry charges	59	51	55	59	63	74
Primary industry levy	531	512	577	691	778	782
Broadcasting and television licence fees	59	69	77	86	110	271
Other taxes fees and fines	314	341	324	362	367	426
Total	*53,048*	*58,999*	*66,354*	*74,897*	*83,252*	*91,325*
Non-taxation revenue—						
Interest, rent, dividends, royalties, etc.	4,571	5,806	6,513	5,928	4,782	4,551
Total revenue	***57,619***	***64,805***	***72,867***	***80,825***	***88,034***	***95,876***
Financing transactions	***6,696***	***5,627***	***2,620***	***–2,079***	***–5,928***	***–9,124***
Increase in provisions	115	172	273	–51	–179	–77
Net financial requirement	**6,581**	**5,455**	**2,347**	**–2,028**	**–5,749**	**–9,047**

(*a*) Current grants to PTE's are classified as subsidies and are not included in Grants to Non-budget sector. (*b*) Gross Capital Formation covers the purchase of new fixed assets purchased less sales of second-hand fixed assets and increase in stocks. (*c*) Capital grants to public financial enterprises, private enterprises, persons and non-profit organisations. (*d*) Net advances to public financial enterprises, private enterprises, persons, non-profit organisations and overseas.

Net Financing Requirement of the Commonwealth Government

Net Financing Requirement (NFR) is financing transactions less net intra-sector advances received and increases in provisions. It is a measure which encompasses governments' net borrowing, their call on cash reserves and the net change in their other financial assets and liabilities. It excludes net advances received from other parts of the non-financial public sector in order to provide an unduplicated measure of this sector's demand for financing from the rest of the economy and overseas.

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 and/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 Airways Ltd, Australian Airlines Limited, the Australian Shipping Commission, the Snowy Mountains Hydro-Electric Authority, and public financial enterprises such as the Reserve Bank of Australia and the Commonwealth Bank of Australia. 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 Corporation, Australian National University and the Australian Nuclear Science and Technology Organisation.

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.

Summary of outlay, revenue and net public sector borrowing requirement

The outlay and revenue, and net financing requirement, of all non-financial enterprises of the Commonwealth Government for the six-year period ending 1988–89 are given in the following table.

FINANCIAL TRANSACTIONS OF COMMONWEALTH GOVERNMENT
($ million)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89p*
Current outlays	52,620	59,693	65,984	71,577	76,491	79,020
General government final consumption expenditure	11,422	12,878	14,460	15,912	16,491	17,357
Requited current transfer payments*(a)*	4,837	6,304	7,933	8,893	9,096	8,657
Unrequited current transfer payments	36,361	40,512	43,590	46,773	50,905	53,006
Subsidies paid to enterprises	1,464	1,633	1,649	1,315	1,365	1,366
Personal benefit payments	18,405	20,659	22,356	24,199	26,951	28,353
Current grants	16,492	18,2220	19,585	21,259	22,589	23,286
to non-profit institutions	724	882	972	1,104	1,009	1,184
to foreign governments and organisations	773	861	855	824	849	939
to State and local governments	14,996	16,477	17,757	19,330	20,730	21,164
Capital outlays	7,601	7,412	8,448	8,058	6,325	8,296
Gross fixed capital expenditure	2,369	2,807	4,129	4,469	4,009	4,692
Expenditure on new fixed assets	2,395	3,103	4,496	4,768	4,455	5,008
Expenditure on second-hand fixed assets (net)*(b)*	–25	–296	–367	–299	–446	–316
Increase in stocks*(b)*	934	170	–282	–612	–395	200
Expenditure on land and intangible assets (net)*(b)*	–37	–91	–60	–52	–326	111
Capital transfer payments	3,160	3,601	3,614	3,600	3,470	3,495
Capital grants	3,160	3,601	3,614	3,600	3,470	3,495
to State and local governments	2,793	3,166	3,247	3,250	3,070	3,081
to other sectors	367	435	367	351	400	414
Advances paid (net)	1,175	924	1,048	653	–433	–202
to State and local government	1,002	799	786	546	–48	–104
to other sectors*(b)*	173	125	262	107	–385	–98
Revenue and grants received	49,731	59,128	66,489	74,035	83,471	91,776
Taxes, fees and fines	44,935	53,070	58,916	66,335	74,911	83,340
Net operating surpluses of public trading enterprises	1,328	2,034	2,323	1,627	2,882	3,770
Property income and other revenue	3,467	4,024	5,250	6,073	5,679	4,666
Income from Commonwealth public financial enterprises	797	1,066	2,025	2,725	1,981	633
Interest received	2,413	2,654	2,986	3,157	3,367	3,565
—from State government and local governments on advances	2,083	2,227	2,330	2,427	2,479	2,438
—other	331	427	656	730	888	1,127
Other property income	257	304	238	192	331	468
Financing transactions*(c)*	10,490	7,978	7,942	5,601	–655	–4,460
Net advances received	—	—	—	—	—	—
Net domestic borrowing	8,311	6,617	5,329	4,304	–2,228	–2,833
Net borrowing from abroad	1,286	1,609	969	1,746	–1,349	–2,148
Increase in provisions	1,241	1,029	1,339	1,736	1,904	2,050
Other financing transactions*(c)*	–348	–1,277	304	–2,185	1,018	–1,529
Net financing requirement*(c)*	9,249	6,949	6,603	3,865	–2,560	–6,510

(a) Interest, land rent, royalties and dividends paid. *(b)* Includes major assets sales of $1,059 million in 1987–88 and $538 million in 1988–89. *(c)* Calculated as a residual.

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. 4 *Commonwealth Financial Relations with Other Levels of Government*. 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 table shows 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, 1987–88
($ million)

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*Total*
Current grants	*6,511.9*	*4,849.5*	*3,476.7*	*2,059.9*	*2,212.6*	*735.9*	*795.3*	*20,640.8*
General public services, defence, public order and safety	29.2	20.9	14.1	9.2	10.7	0.2	0.3	84.7
Education	1,385.7	1,093.6	572.8	324.5	350.5	97.5	18.7	3,843.2
Primary and secondary education	538.9	435.0	242.3	114.0	130.8	36.9	16.5	1,514.3
Tertiary education	847.3	656.9	329.5	207.8	217.1	60.4	2.2	2,321.2
University education	531.8	316.0	175.6	110.8	100.2	42.7	—	1,277.1
Other higher education	219.0	307.9	135.2	84.6	104.0	13.6	0.1	864.3
Technical and further education	96.5	33.0	18.8	12.4	12.8	4.1	2.2	179.8
Preschool education and education not definable by level	–0.6	1.8	1.0	2.8	2.6	0.1	—	7.6
Other education not definable by level	–0.6	1.8	1.0	2.8	2.6	0.1	—	7.6
Health	488.1	298.7	102.4	133.6	118.0	43.2	14.1	1,198.3
Hospitals and other institutional services and benefits	468.2	286.1	84.7	126.6	101.0	39.7	13.4	1,119.7
Clinic and other non-institutional services and benefits	8.9	6.3	9.2	4.0	7.3	2.8	0.2	38.7
Public health	11.0	6.3	8.5	3.0	9.7	0.8	0.5	39.9
Other health	0.1	—	—	—	—	—	—	0.1
Social security and welfare	77.2	76.3	31.6	30.3	26.0	7.0	3.3	251.7
Social security	0.4	—	—	—	—	—	—	0.5
Welfare services	68.0	69.7	27.5	28.1	23.7	6.3	3.0	226.2
Family and child welfare	4.2	5.8	1.8	10.0	1.7	0.5	1.2	25.2
Aged and handicapped welfare	60.1	53.8	18.8	13.5	17.4	3.8	0.7	168.2
Welfare services n.e.c.	3.6	10.1	6.9	4.6	4.6	2.0	1.0	32.8
Social security and welfare n.e.c.	8.8	6.6	4.1	2.2	2.3	0.7	0.2	25.0
Housing and community amenities	1.2	2.1	0.4	2.2	1.6	2.6	0.5	10.5
Housing and community development	0.1	1.3	0.4	2.2	1.3	0.3	0.3	6.0
Housing	1.8	1.3	0.4	1.2	0.6	0.3	—	5.8
Community development	–1.7	—	—	1.0	0.7	—	0.3	0.3
Community amenities	1.0	0.7	—	—	0.3	2.2	0.2	4.5
Fuel and energy	29.8	—	12.9	—	0.6	0.1	51.5	95.0
Agriculture, forestry, fishing and hunting	20.5	15.8	31.6	10.5	12.3	1.8	13.1	105.8
Agriculture	20.5	15.8	31.6	10.5	12.3	1.8	13.1	105.8
Agricultural land management	13.6	12.1	22.0	8.4	8.1	1.1	12.8	78.1
Agricultural water resources management	1.0	0.6	—	0.3	—	—	—	1.9
Other agriculture	5.9	3.2	9.7	1.8	4.2	0.8	0.4	25.8
Transport and communications	1.7	1.0	0.6	0.6	0.2	0.3	0.2	4.6
Road transport	1.7	1.0	0.6	0.5	0.2	—	0.2	4.3
Other transport and communications	—	—	—	—	—	0.3	—	0.3
Other economic affairs	48.6	26.0	17.6	12.5	10.6	3.1	1.4	119.7
Other purposes	4,429.8	3,315.0	2,695.2	1,536.6	1,682.0	580.1	692.2	14,927.3
General purpose inter-government transactions	4,428.2	3,315.0	2,686.8	1,536.6	1,682.0	580.1	692.2	14,920.0
Natural disaster relief	1.6	—	5.7	—	—	—	—	7.3

GRANTS TO STATES AND NORTHERN TERRITORY BY GOVERNMENT PURPOSE CLASSIFICATION AND STATE, 1987–88—*continued*
($ million)

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*Total*
Capital grants	*1,010.6*	*663.6*	*516.9*	*284.2*	*369.6*	*125.9*	*113.6*	*3,084.3*
General public services, defence, public order and safety	—	—	—	—	60.0	—	—	60.0
Education	198.6	159.1	105.8	42.9	58.1	25.0	5.9	595.3
Primary and secondary education	68.8	57.0	39.3	18.3	20.9	5.9	5.3	215.6
Tertiary education	129.9	102.1	66.2	24.5	37.2	19.0	0.2	379.1
University education	39.3	26.5	19.9	7.9	10.5	5.9	—	110.0
Other higher education	22.8	27.4	19.6	5.3	11.6	5.8	0.2	92.8
Technical and further education	67.8	48.2	26.7	11.3	15.0	7.3	—	176.3
Preschool education and education not definable by level	-0.1	—	0.2	—	0.1	—	0.3	0.6
Other education not definable by level	-0.1	—	0.2	—	0.1	—	0.3	0.6
Health	17.3	13.7	7.9	4.4	4.5	12.6	0.5	60.9
Hospitals and other institutional services and benefits	16.8	12.7	7.7	4.2	4.3	12.6	0.5	58.7
Clinic and other non-institutional services and benefits	0.4	1.0	0.1	0.2	0.3	—	—	2.1
Public health	—	—	—	—	—	—	—	—
Social security and welfare	11.1	11.6	7.1	3.9	4.9	1.0	0.5	40.0
Welfare services	11.1	11.6	7.1	3.9	4.9	1.0	0.5	40.0
Family and child welfare	9.0	9.2	5.5	3.6	4.2	1.0	0.5	32.9
Aged and handicapped welfare	2.0	2.4	1.7	0.3	0.7	—	—	7.0
Welfare services n.e.c.	0.1	—	—	—	—	—	—	0.1
Housing and community amenities	213.0	158.4	103.7	123.4	70.3	25.5	1.0	695.3
Housing and community development	247.9	156.1	102.3	67.6	69.5	25.1	—	668.6
Housing	247.9	156.1	102.1	66.7	64.0	25.1	—	661.9
Community development	—	—	0.2	0.9	5.5	—	—	6.6
Community amenities	-35.0	2.2	1.4	55.8	0.8	0.4	1.0	26.7
Recreation and culture	15.4	5.4	1.1	4.8	3.4	1.5	0.2	31.8
Fuel and energy	—	—	—	—	—	28.4	0.8	29.2
Agriculture, forestry, fishing and hunting	1.6	2.1	22.6	—	1.3	—	—	27.6
Agriculture	1.6	2.1	20.5	—	1.3	—	—	25.5
Agricultural water resources management	1.6	2.0	20.5	—	1.3	—	—	25.4
Other agriculture	—	0.1	—	—	—	—	—	0.1
Forestry, fishing and hunting	—	—	2.1	—	—	—	—	2.1
Transport and communications	448.5	249.3	254.2	92.6	154.1	47.2	—	1,245.9
Road transport	447.5	249.3	254.2	92.6	154.1	46.9	—	1,244.6
Water transport	1.3	—	—	—	—	—	—	1.3
Other transport and communications	-0.3	—	—	—	—	—	—	-0.3
Other economic affairs	5.6	—	0.6	2.0	0.1	—	—	8.2
Other purposes	99.7	64.1	13.8	10.1	13.0	-15.2	104.7	290.1
General purpose inter-government transactions	84.6	64.1	13.8	10.1	13.0	-15.2	104.7	275.0
Natural disaster relief	15.1	—	—	—	—	—	—	15.1
Total current and capital grants	**7,522.4**	**5,513.1**	**3,992.6**	**2,344.2**	**2,582.2**	**861.8**	**908.9**	**23,725.1**

Advances to the States and the Northern Territory

The Commonwealth provides 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 Budget Paper No. 4 *Commonwealth Financial Relations with Other Levels of Government.*

The following table shows figures of net advances to the States and Northern Territory by purpose.

NET ADVANCES TO STATES AND THE NORTHERN TERRITORY BY GOVERNMENT PURPOSE CLASSIFICATION, 1987–88
($ million)

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*Total*
Net advances	*11.3*	*15.4*	*-23.3*	*-110.8*	*-4.1*	*18.8*	*44.7*	*-48.0*
Defence	1.0	-0.1	-0.2	—	-0.1	—	—	0.7
Social security and welfare	—	—	—	—	—	—	—	—
Housing and community amenities	62.4	92.5	24.2	50.6	31.5	36.4	49.4	347.0
Housing and community development	66.2	92.5	24.2	49.1	31.6	36.4	49.6	349.5
Housing	66.3	92.8	24.2	49.1	33.1	36.4	49.6	351.4
Community development	-0.1	-0.2	—	—	-1.5	—	—	-1.8
Water supply	-2.4	—	—	1.5	—	—	—	-0.9
Sanitation and protection of the environment	-1.5	—	—	—	—	—	-0.1	-1.6
Recreation and culture	—	—	—	—	-0.2	—	—	-0.2
Fuel and energy	-0.1	—	-3.6	—	—	—	-2.3	-5.9
Agriculture, forestry, fishing and hunting	-7.2	-5.1	-6.1	-2.6	-2.9	-0.5	0.7	-23.8
Agriculture	-6.5	-4.8	-5.5	-2.5	-2.7	-0.2	0.7	-21.6
Agricultural land management	—	—	-0.7	—	—	—	—	-0.7
Agricultural water resources management	-1.3	-0.8	—	-0.6	—	—	—	-2.7
Agricultural support schemes	-4.9	-4.0	-5.2	-1.9	-2.7	-0.2	—	-18.9
Other agriculture	-0.3	—	0.3	—	—	—	0.7	0.7
Forestry, fishing and hunting	-0.7	-0.3	-0.5	-0.1	-0.2	-0.3	—	-2.2
Mining, manufacturing and construction	-0.4	—	—	—	—	—	—	-0.4
Manufacturing	-0.4	—	—	—	—	—	—	-0.4
Transport and communications	-1.6	-0.9	-1.0	—	-3.6	—	—	-7.3
Water transport	—	—	-0.1	—	—	—	—	-0.2
Rail transport	-1.6	-0.9	-0.9	—	-3.6	—	—	-7.1
Other purposes	-42.9	-70.9	-36.6	-158.8	-28.8	-17.0	-3.1	-358.1
Public debt transactions	—	—	—	—	—	—	-6.6	-6.6
General purpose inter-government transactions	-59.2	-67.4	-32.7	-155.2	-23.7	-17.0	3.5	-351.8
Natural disaster relief	16.4	-3.5	-3.8	-3.6	-5.1	-0.1	—	0.3

NOTE: 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, other factor income transfers, borrowing, and other financing transactions. Taxation constitutes by far the major source of revenue.

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 table shows Commonwealth government taxation revenue classified by type of tax for the six years ending 1988–89.

COMMONWEALTH GOVERNMENT—TAXES, FEES AND FINES BY TYPE
($ million)

Type of tax	*1983–84*	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Taxes, fees and fines	44,935	53,070	58,916	66,335	74,911	83,340
Taxes on income	29,622	35,308	39,389	45,386	51,279	58,426
Income taxes levied on individuals	24,692	29,289	32,714	38,062	41,887	47,537
Personal income tax	24,691	29,287	32,713	38,061	41,886	47,536
Mining withholding tax	1	1	1	1	1	1
Income taxes levied on enterprises	4,465	5,486	5,979	6,539	8,573	9,991
Company income tax	4,444	5,471	5,957	6,526	8,562	9,983
Income tax paid by superannuation funds	21	14	22	13	11	7
Income taxes levied on non-residents	466	534	696	785	818	898
Dividend withholding tax	130	155	209	172	125	97
Interest withholding tax	175	248	351	466	541	639
Other income tax levied on non-residents	162	131	135	147	153	162
Employers' payroll taxes	39	51	56	569	919	1,071
General taxes (payroll tax)	20	24	29	34	41	54
Selective taxes (stevedoring industry charges)	19	27	27	24	26	28
Fringe benefits tax	—	—	—	512	852	990
Taxes on property	228	240	261	342	464	508
Taxes on immovable property	25	28	31	37	52	66
Estate, inheritance and gift duties	4	1	—	1	1	1
Taxes on financial and capital transactions	200	211	229	304	411	442
Stamp duties	17	21	27	40	61	63
Financial institutions' transaction taxes	183	190	202	261	342	370
Government borrowing guarantee levies	—	—	—	4	9	9
Taxes on provision of goods and services	14,679	17,033	18,719	19,471	21,606	22,523
General taxes (sales tax)	4,165	4,966	5,728	6,348	7,562	9,402
Excises	8,084	9,056	9,605	9,769	10,285	9,280
Excises on crude oil and LPG	3,665	4,242	4,066	2,106	2,079	1,197
Other Excise Act duties	4,082	4,352	5,186	7,222	7,596	7,477
Agricultural production taxes	338	463	353	441	609	606
Taxes on international trade	2,398	2,995	3,358	3,314	3,711	3,783
Customs duties on imports	2,329	2,927	3,282	3,237	3,632	3,705
Customs duties on exports	67	60	58	55	55	54
Agricultural produce export taxes	2	9	18	22	24	24
Taxes on gambling	6	9	9	11	13	21
Taxes on insurance	26	6	19	30	36	38
Taxes on use of goods and performance of activities	114	132	151	173	204	207
Motor vehicle taxes	17	19	21	24	30	38
Franchise taxes	4	5	10	14	21	21
Other taxes on use of goods etc.	93	107	120	135	153	148
Broadcast and TV station licences	48	59	69	77	86	108
Departure tax	43	47	50	56	66	38
Other taxes on use of goods etc. n.e.i.	1	2	1	2	2	2
Fees and fines	252	307	342	394	439	605
Compulsory fees, of which	243	299	334	386	429	592
Aviation en route charges	123	135	144	189	188	309
Light dues and navigation Act charges	32	37	36	36	40	40
Tertiary education charges	—	—	—	4	3	8
Fines	10	8	8	9	11	13

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.

Outlay, revenue, grants received, and deficit

The outlay, revenue, grants received and deficit of State Governments for the six year period ended 1988–89 are given in the following table.

AUSTRALIA—FINANCIAL TRANSACTIONS OF STATE GOVERNMENTS
($ million)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89p*
Current outlays	28,324	32,007	35,606	39,294	42,922	46,505
General government final consumption expenditure	18,534	20,730	22,864	25,078	27,230	29,485
Requited current transfer payments	5,030	6,106	7,024	7,902	8,921	9,658
Interest payments	5,030	6,106	7,024	7,901	8,911	9,638
to Commonwealth Government on advances	2,084	2,188	2,324	2,427	2,484	2,438
other	2,946	3,918	4,700	5,474	6,427	7,200
Land rent, royalties and dividends paid	—	—	—	—	10	20
Unrequited current transfer payments	4,760	5,171	5,718	6,315	6,771	7,362
Subsidies paid to enterprises	1,869	1,967	2,296	2,557	2,673	2,915
Personal benefits payments	603	661	701	791	892	1,007
Current grants	2,288	2,542	2,722	21,945	3,185	3,396
to non profit institutions	1,529	1,720	1,892	2,103	2,248	2,492
to local governments	759	822	830	842	937	904
Other current transfer payments	—	2	—1	22	22	44
Capital outlays	10,557	10,626	11,561	12,470	11,089	10,640
Gross fixed capital expenditure	9,458	9,494	10,503	11,215	10,200	10,536
Expenditure on new fixed assets	9,520	9,630	10,655	11,437	10,725	11,648
Expenditure on second hand fixed assets (net)	-62	-136	-152	-223	-525	-1,112
Increase in stocks	111	19	22	225	130	-21
Expenditure on land and intangible assets (net)	66	146	-38	-109	-144	-650
Capital transfer payments	576	616	592	585	676	663
Capital grants	576	616	592	585	676	663
to local governments	439	462	419	446	506	466
to other sectors	95	116	157	128	164	182
Other capital transfer payments	42	37	16	10	6	14
Advances paid (net)	345	351	482	555	227	111
to local governments	23	-54	41	24	4	-7
to other sectors	322	405	441	531	223	118
Revenue	31,968	36,166	40,124	43,983	48,742	52,951
Taxes, fees and fines	9,300	10,462	11,504	13,132	15,646	18,386
Net operating surpluses of PTEs	2,629	3,242	3,829	4,510	5,218	5,338
Property income and other revenue	2,303	2,852	3,869	3,827	4,209	5,137
Income from public financial enterprises	113	150	221	246	268	432
Interest received	1,055	1,430	2,070	2,168	2,302	2,955
Other property income and other revenue	1,135	1,272	1,578	1,413	1,640	1,749
Grants received	17,735	19,610	20,922	22,514	23,669	24,090
Financing transactions*(a)*	6,913	6,467	7,043	7,781	5,270	4,194
Net advances received	993	815	781	549	-45	-94
Net domestic borrowing	4,176	3,472	4,490	4,897	4,490	2,731
Net borrowing from abroad	1,444	1,251	1,063	1,045	349	1,162
Increase in provisions	1,492	1,839	1,951	2,062	2,188	3,034
Other financing transactions*(a)*	-1,192	-910	-1,241	-772	-1,712	-2,639
Deficit*(a)*	**5,421**	**4,628**	**5,092**	**5,719**	**3,082**	**1,160**
Net financing requirement*(a)*	**4,428**	**3,814**	**4,311**	**5,171**	**3,127**	**1,254**

(a) Calculated as a residual.

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 provision of 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 and Northern Territory 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.

AUSTRALIA—FINANCIAL TRANSACTIONS OF LOCAL GOVERNMENTS
($ million)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89(a)*
Current outlays	2,808	3,093	3,401	3,693	3,972	3,996
Final consumption expenditure	2,091	2,309	2,532	2,739	2,974	2,966
Requited current transfer payments	607	669	743	814	840	844
Unrequited current transfer payments	110	115	127	139	158	186
Capital outlays	1,682	1,979	2,167	2,308	2,474	2,694
Gross fixed capital expenditure	1,695	1,984	2,167	2,299	2,505	2,693
Expenditure on new fixed assets	1,744	2,055	2,252	2,365	2,623	2,779
Expenditure on second-hand fixed assets (net)	–48	–72	–85	–66	–118	–85
Increase in stocks	–10	–9	10	9	1	1
Expenditure on land and intangible assets (net)	–7	–2	–24	–25	–35	9
Capital transfer payments	4	–2	4	4	6	–13
Advances paid (net)	—	8	9	22	–4	5
Revenue and grants received	4,380	4,773	5,221	5,612	6,051	6,464
Taxes, fees and fines	2,309	2,537	2,779	3,032	3,332	3,678
Net operating surpluses of public trading enterprises	384	378	399	442	453	560
Property income and other revenue	446	527	734	834	736	775
Grants received	1,240	1,332	1,308	1,303	1,531	1,451
—from Commonwealth Government	54	73	102	99	100	109
—from State Governments	1,186	1,259	1,207	1,204	1,430	1,342
Financing transactions*(b)*	110	299	347	389	395	226
Net advances received	11	–69	24	22	5	–7
Net domestic borrowing	369	543	448	330	250	228
Net borrowing from abroad	—	—	—	—	—	—
Increase in provisions	253	245	295	251	286	293
Other financing transactions*(b)*	–523	–420	–420	–214	–146	–288
Deficit*(b)*	**–143**	**54**	**52**	**138**	**109**	**–67**
Net financing requirement*(b)*	–154	124	28	116	105	–60

(a) Forward estimate. *(b)* Calculated as a residual.

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; in 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*.

All Levels of Government

In the following table the transactions of the Commonwealth, 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 of all governments for the years 1983–84 to 1988–89 are set out in the following table.

FINANCIAL TRANSACTIONS OF COMMONWEALTH, STATE AND LOCAL GOVERNMENTS
($ million)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89(a)*
Current outlays	65,782	75,154	83,892	91,697	98,913	104,679
General government final consumption expenditure	32,046	35,916	39,856	43,729	46,695	49,808
Requited current transfer payments	8,333	10,813	13,272	15,026	16,206	16,585
Interest payments	8,332	10,813	13,272	15,025	16,196	16,565
Land, royalties and dividends paid	—	—	—	—	10	20
Unrequited current transfer payments	25,404	28,424	30,765	32,943	36,012	38,286
Subsidies paid to enterprises	3,356	3,625	3,970	3,899	4,041	4,282
Personal benefit payments	19,008	21,320	23,057	24,990	27,843	29,360
Current grants	3,040	3,478	3,739	4,054	4,128	4,642
Other current transfer payments	—	2	-1	—	—	3
Capital outlays	15,605	15,671	17,741	18,649	16,352	18,190
Gross fixed capital expenditure	13,553	14,320	16,865	18,074	16,724	17,930
Expenditure on new fixed assets	13,689	14,824	17,469	18,661	17,813	19,442
Expenditure on second-hand fixed assets (net)	-136	-503	-604	-587	-1,089	-1,513
Increase in stocks	1,035	180	-250	-378	-263	179
Expenditure on land and intangible assets (net)	23	53	-122	-186	-505	-530
Capital transfer payments	504	589	541	490	571	596
Capital grants	462	552	525	480	565	596
Other capital transfer payments	42	37	16	10	6	—
Advances paid (net)	491	528	707	650	-175	15
Revenue	64,899	76,758	87,088	97,143	110,291	122,883
Taxes, fees and fines	56,544	66,068	73,200	82,498	93,889	105,397
Net operating surpluses of PTEs	4,342	5,653	6,551	6,580	8,552	9,669
Property income and other revenue	4,013	5,037	7,337	8,065	7,849	7,816
Grants received	—	—	—	—	—	—
Financing transactions*(b)*	16,489	14,068	14,545	13,203	4,974	-13
Net advances received	—	—	—	—	—	—
Net domestic borrowing	12,771	10,639	10,148	9,544	2,522	138
Net borrowing from abroad	2,730	2,860	2,032	2,791	-1,000	-985
Increase in provisions	2,966	3,180	3,603	4,051	4,301	5,303
Other financing transactions*(b)*	-1978	-2,611	-1,237	-3,182	-849	-4,469
Net financing requirement*(b)*	13,523	10,888	10,942	9,152	673	-5,316

(a) Forward estimate. *(b)* Calculated as residual.

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, the States and the Northern Territory together with some details of the amounts borrowed by State, Territory 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 and Northern Territory 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 and the Northern Territory. 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 and Northern Territory works programs. A number of State and Northern Territory 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 and the Northern Territory: government securities on issue

Under the 1927 Financial Agreement between the Commonwealth Government and the States (as amended to 1976), 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.

During 1985–86, an agreement was reached with the Northern Territory Government for the formal allocation of securities relating to the Northern Territory Government's Borrowing Program and associated (nominal) debt allocations.

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 and the Northern Territory for interest, exchange, etc. paid on their behalf, and the securities are redeemed from the Fund to which both the Commonwealth, the State Governments and the Northern Territory (from 1985–86) 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 and the Northern Territory.

For further information relating to operations of the National Debt Sinking Fund reference should be made to the 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, the States and the Northern Territory from 1985–86. 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 Related Paper No. 1, *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 1983–84 to 1988–89, are given in the following group of tables.

NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE
($ million)

(*Source:* **Budget Related Paper 1—Government Securities on Issue 1989 (Table 9)**)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
	NEW SECURITIES ISSUED					
Securities repayable in Australian currency—						
Treasury bonds	10,850.0	9,222.2	6,850.3	5,402.7	2,901.2	2,500.0
Treasury indexed bonds	—	—	331.8	303.7	202.7	—
Australian savings bonds	3,599.1	505.2	487.9	138.7	321.2	—
Special bonds	—	—	—	—	—	—
Income equalization deposits	24.0	3.7	0.8	0.4	0.7	0.5
Drought bonds	—	—	—	—	—	—
Overdue securities	—	—	—	—	—	—
Tax-free stock	—	—	—	—	—	—
Debentures	—	—	—	—	—	—
Stock issued to Government savings banks under special agreements*(a)*	114.6	71.1	—	—	—	—
Treasury notes	—	—	—	—	—	—
Treasury bills—						
Internal	—	—	—	—	71.7	1,995.7
Public	—	—	—	—	—	—
Other*(b)*	—	—	31.0	—	—	—
Total	*14,587.8*	*9,802.2*	*7,701.9*	*5,845.5*	*3,497.5*	*4,496.2*
Securities repayable in overseas currencies(c)	*1,238.4*	*1,729.1*	*2,555.2*	*2,886.1*	—	—
Total new securities issued	**15,826.2**	**11,531.3**	**10,254.1**	**8,731.6**	**3,497.5**	**4,496.2**
	REDEMPTIONS, REPURCHASES, CANCELLATIONS *(d)*					
Securities repayable in Australian currency—						
Treasury bonds	3,189.2	2,990.2	4,621.6	3,587.2	5,072.8	6,103.6
Treasury indexed bonds	—	—	0.5	0.6	0.5	0.7
Australian savings bonds	1,619.9	1,177.3	2,493.0	650.5	285.6	747.7
Special bonds	31.5	—	—	—	—	—
Income equalization deposits	48.6	40.5	27.9	19.1	14.2	5.4
Drought bonds	—	—	—	—	—	—
Overdue securities	9.0	8.8	2.4	1.4	1.1	3.3
Tax-free stock	0.2	0.1	—	—	0.1	0.2
Debentures	—	—	—	—	—	—
Stock issued to Government savings banks under special agreements*(a)*	6.0	6.2	19.0	31.8	35.3	37.9
Treasury notes	1,562.8	-821.7	-3,958.8	-1,286.9	290.8	-1,683.5
Treasury bills—						
Internal	479.6	212.9	-107.3	627.1	—	71.7
Public	—	—	—	—	—	—
Other*(b)*	—	—	—	5.4	3.3	9.3
Total	*6,946.9*	*3,614.4*	*3,098.5*	*3,636.1*	*5,703.6*	*5,296.5*
Securities repayable in overseas currencies(c)	*666.1*	*2,697.0*	*4,217.2*	*2,533.5*	*1,566.1*	*3,181.9*
Total redemptions, etc.	**7,612.9**	**6,311.4**	**7,315.7**	**6,169.6**	**7,269.7**	**8,478.4**

For footnotes *see* end of table.

NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE—*continued*
($ million)

(*Source*: **Budget Related Paper 1—Government Securities on Issue 1989 (Table 9)**)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
	NET MOVEMENT					
Securities repayable in Australian currency—						
Treasury bonds	7,653.9	6,227.4	2,228.7	1,813.1	-2,172.6	-3,604.0
Treasury indexed bonds	—	—	331.3	303.1	202.2	-0.7
Australian savings bonds	1,975.6	-674.2	-2,005.1	-509.3	34.1	-748.7
Special bonds	-31.9	—	—	—	—	—
Income equalization deposits	-24.5	-36.8	-27.1	-18.6	-13.5	-4.9
Drought bonds	-0.1	—	—	—	—	—
Overdue securities	2.0	-2.2	-2.4	-1.4	1.4	-1.9
Tax-free stock	-0.2	-0.1	—	—	—	-0.2
Debentures	—	—	—	—	—	—
Stock issued to Government savings banks under special agreements*(a)*	108.7	64.9	-19.0	-31.8	-35.3	-37.9
Treasury notes	-1,562.8	821.7	3,958.8	1,286.9	-290.8	1,683.5
Treasury bills—						
Internal	-479.6	-212.9	107.3	-627.1	71.7	1,924.0
Public	—	—	—	—	—	—
Other*(b)*	—	—	30.8	-5.4	-3.3	-9.3
Total	*7,640.9*	*6,187.8*	*4,603.4*	*2,209.4*	*-2,206.1*	*-800.3*
Securities repayable in overseas currencies(c)	*572.3*	*-967.9*	*-1,662.0*	*352.6*	*-2,372.7*	*-3,303.6*
Net movement in securities on issue	**8,213.3**	**5,219.9**	**2,941.4**	**2,562.0**	**-4,578.8**	-4,103.9

(a) Recorded in Commonwealth Government Loan Fund as State domestic raisings. *(b)* Loans taken over from the previous Canberra Commercial Development Authority. *(c)* Australian currency equivalent at rates of exchange ruling at 30 June in each of the years shown. *(d)* 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, the States and the Northern Territory, repayable in Australian and in overseas currencies.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH GOVERNMENT AND STATES AND NORTHERN TERRITORY
($ million)

(*Source*: **Budget Related Paper 1—Government Securities on Issue 1989 (Tables 2, 20)**)

	30 June					
	1984	*1985*	*1986*	*1987*	*1988*	*1989*
For Commonwealth Government purposes—						
Repayable in Australian currency—						
Treasury bonds	15,493.6	21,288.6	22,310.8	23,826.0	21,923.1	18,168.6
Treasury indexed bonds	—	—	331.3	634.5	836.7	836.0
Australian savings bonds	4,577.3	3,914.7	2,033.6	1,682.8	1,784.3	1,425.1
Special bonds	—	—	—	—	—	—
Income equalization deposit	130.9	94.1	67.1	48.4	34.9	30.0
Drought bonds	—	—	—	—	—	—
Advance loan subscriptions	—	—	—	—	—	—
Overdue securities	8.8	6.7	5.5	4.7	4.1	3.3
Treasury notes	2,073.0	2,894.7	6,853.5	8,140.4	7,849.6	9,533.1
Treasury bills—						
Internal	732.7	519.8	627.1	—	71.7	1,995.7
Public	—	—	—	—	—	—
Other*(a)*	—	—	30.7	25.3	22.0	12.6
Total	*23,016.4*	*28,718.7*	*32,259.7*	*34,362.0*	*32,526.4*	*32,004.4*
Repayable in overseas currencies*(b)*	7,076.2	9,786.4	13,827.0	15,058.8	12,686.2	9,382.9
Total Commonwealth Government	*30,092.6*	*38,505.1*	*46,086.7*	*49,420.9*	*45,212.7*	41,387.3

For footnotes *see* end of table.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH GOVERNMENT AND STATES AND NORTHERN TERRITORY—*continued*
($ million)

(*Source*: **Budget Related Paper 1—Government Securities on Issue 1989 (Tables 2, 20))**

	30 June					
	1984	*1985*	*1986*	*1987*	*1988*	*1989*
On account of States—						
Repayable in Australian currency—						
Treasury bonds	13,932.2	14,364.6	15,569.6	15,867.5	15,597.7	15,748.2
Australian savings bonds	2,071.1	2,059.4	1,934.7	1,776.3	1,708.9	1,319.4
Special bonds	—	—	—	—	—	—
Tax-free stock	13.6	13.5	13.5	13.5	13.4	13.2
Stock issued to Government savings banks under special agreements	816.5	881.3	862.3	830.5	795.3	757.3
Debentures	—	—	—	—	—	—
Overdue securities	0.1	—	1.2	0.6	2.7	1.5
Total	*16,833.4*	*17,318.9*	*18,381.3*	*18,488.4*	*18,117.9*	*17,839.6*
Repayable in overseas currencies*(b)*	7.7	6.4	5.4	5.3	5.2	4.9
Total States of which—	*16,841.1*	*17,325.2*	*18,386.7*	*18,493.7*	*18,123.1*	*17,884.5*
New South Wales	5,566.5	5,773.5	5,999.2	6,042.6	5,962.7	5,888.0
Victoria	4,204.1	4,385.5	4,550.1	4,587.2	4,525.6	4,473.7
Queensland	2,291.6	2,376.6	2,459.2	2,477.5	2,444.9	2,420.3
South Australia	2,009.4	1,598.2	1,982.9	1,577.3	1,555.7	1,538.1
Western Australia	1,614.9	1,990.6	1,591.5	1,965.4	1,816.3	1,726.7
Tasmania	1,154.5	1,200.7	1,246.3	1,256.4	1,239.7	1,226.6
Northern Territory	—	—	557.7	587.4	578.2	571.1
Total Commonwealth Government and States	**46,933.6**	**55,830.3**	**64,473.4**	**67,914.6**	**63,335.8**	**59,231.8**

(a) Includes loans taken over from the previous Canberra Commercial Development Authority. *(b)* 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. 4, *Commonwealth Financial Relations with Other Levels of Government.*

The following table shows the aggregate borrowings by the State and local authorities in each of the years 1985–86 to 1989–90.

'GLOBAL' NEW MONEY BORROWINGS BY COMMONWEALTH, STATE AND NORTHERN TERRITORY SEMI-GOVERNMENT AND LOCAL AUTHORITIES(a): 1985–86 TO 1989–90
($ '000)

(*Source*: Commonwealth Budget Paper (1988–89) No. 4 (Table 25))

	NSW	*Vic.*	*Qld*	*WA*	*SA*	*Tas.*	*NT*	*ACT*	*States and the Territory*	*Common-wealth(b)*	*Total*
					GLOBAL BORROWINGS ($ million)						
1985–86	2,059	2,007	1,539	741	400	230	65	n.a.	7,041	1,178	8,219
1986–87	1,845	1,875	1,387	635	350	217	86	n.a.	6,395	1,402	7,797
1987–88	1,540	(*c*)1,684	1,161	584	301	182	71	n.a.	5,522	(*d*)865	6,387
1988–89	1,153	1,552	793	658	258	201	85	n.a.	4,700	2,077	6,777
1989–90(*e*)	1,144	1,174	626	448	224	135	81	40	3,871	1,488	5,359
					GLOBAL BORROWINGS ($ per capita)						
1985–86	375	485	593	516	291	517	428	n.a.	443	74	517
1986–87	331	448	523	429	252	485	554	n.a.	396	87	483
1987–88	272	398	429	384	215	406	455	n.a.	337	53	390
1988–89	201	362	285	419	182	447	543	n.a.	282	125	406
1989–90	197	270	219	278	156	299	514	141	228	88	316
					GLOBAL BORROWINGS (percentage of GSP) (*f*)						
1985–86	2.5	3.0	4.3	3.3	2.1	4.1	2.5	n.a.	3.0	0.5.	3.4
1986–87	2.0	2.6	3.5	2.5	1.7	3.4	2.8	n.a.	2.4	0.5	3.0
1987–88	1.5	2.0	2.6	2.0	1.3	2.6	2.2	n.a.	1.9	0.3	2.2
1988–89	1.0	1.7	1.6	2.0	1.0	2.6	2.3	n.a.	1.4	0.6	2.0
1989–90	0.9	1.2	1.1	1.3	0.8	1.6	2.1	0.6	1.1	0.4	1.5

(*a*) Includes borrowings by all Commonwealth, State and Northern Territory semi-government and local authorities, government-owned companies and trusts. (*b*) Includes 'implicit' borrowings associated with instalment purchase transactions by Commonwealth Government departments. (*c*) VIC borrowings for 1987-88 exceeded the State's global limit for the year by $158 million as the sale of the World Trade Centre proceeds of which are to be used to repay debt did not proceed. When the sale proceeds the State's borrowings are expected to be reduced below the global limit by asimilar amount. (*d*) A Commonwealth authority converted approximately $1.2 billion of financial leases to operating leases during 1987–88. These transactions are not reflected in reported global borrowings by Commonwealth authorities. (*e*) 'Global' new money limits agreed at the May 1989 Loan Council Meeting. (*f*) Commonwealth and Total figures are given as a proportion of GDP.

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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25

NATIONAL ACCOUNTS

Description of National Income and Expenditure Accounts

National accounting aims to provide 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.

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 deducting the cost of goods and services used up in the process of production (intermediate consumption), but before deducting 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 consumption of fixed capital. It is equivalent to gross domestic product at factor cost less consumption of fixed capital.

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.

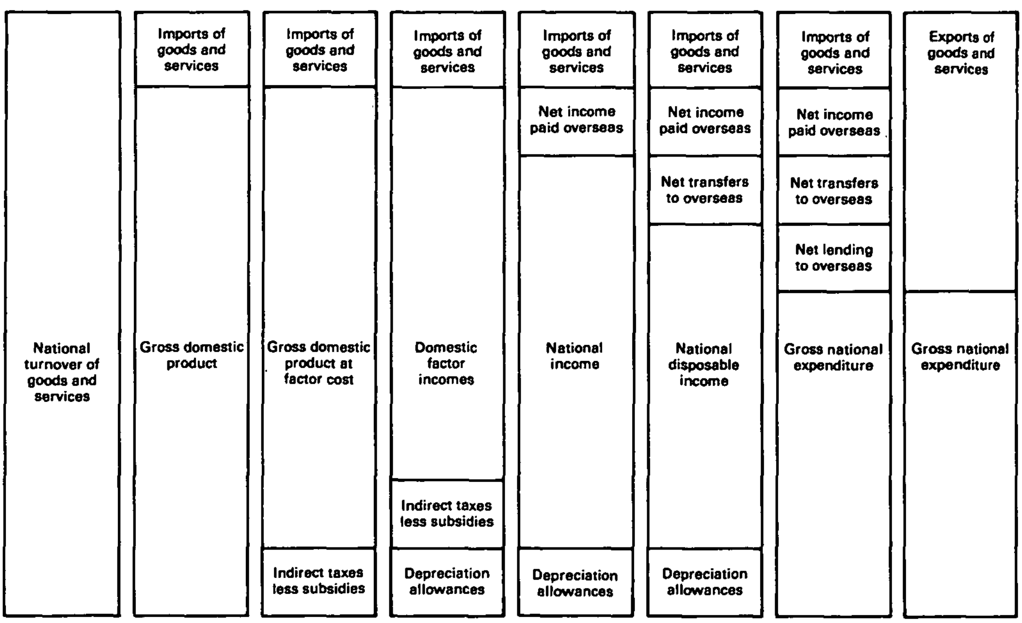
National disposable income is the net income accruing within a given period to Australian residents from their services in supplying factors of production, from net indirect taxes and from net transfers from overseas. It is equivalent to national income less net unrequited transfers to overseas.

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 security 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 relationships between these aggregates (other than household income) are illustrated in the following diagram. No conclusions concerning the relative magnitude of various aggregates can be drawn from the diagram, especially as some of the boxes may represent negative values.

RELATIONSHIP OF MAIN IDENTITIES



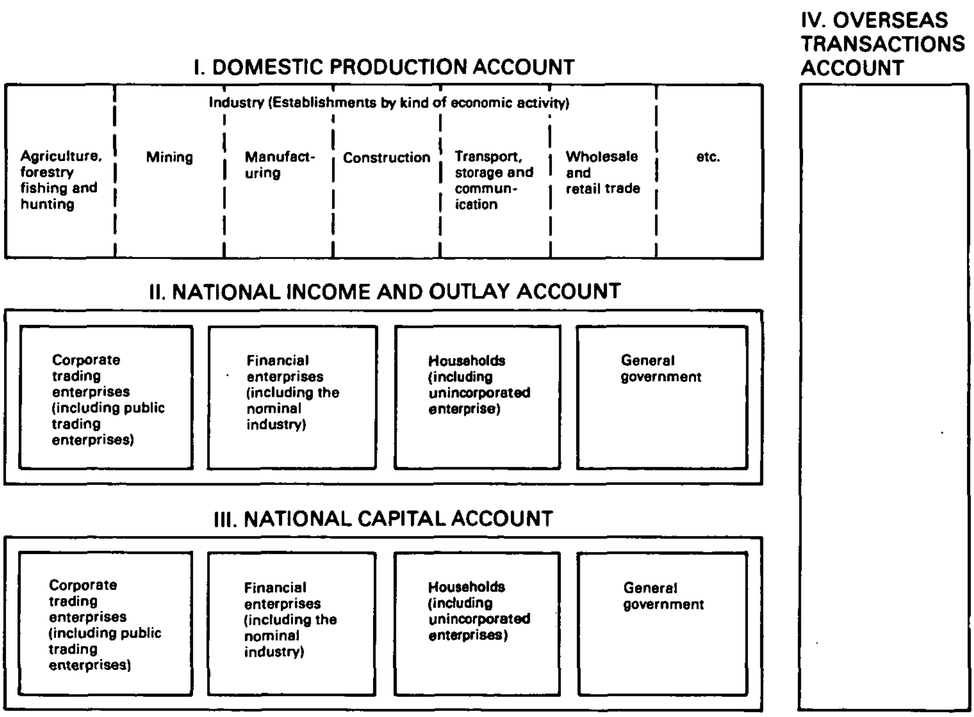
Framework of accounts and sectors

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, a national income and outlay account and a national capital account. In addition, there is an overseas sector having an account 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 large rectangles depict the minimum system of the four 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). Input-output tables are produced by developing such production accounts in detail.

ARTICULATION OF AUSTRALIAN NATIONAL ACCOUNTS



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 consumers (including exports less imports) and increase in stocks. All intermediate goods and services cancel out as the revenue of one producer is offset as the cost to another. On the payments side are shown the costs of production, namely wages, salaries and supplements, gross operating surplus and indirect taxes less subsidies. The aggregation of the receipts side is referred to as expenditure on gross domestic product and is conceptually equivalent to the aggregation of the payments side, referred to as gross domestic product. However, in practice a statistical discrepancy, reflecting net errors and omissions, is required to balance the account and this is shown by convention on the receipts side. 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** records (on the income side) wages, salaries and supplements, net operating surplus and indirect taxes less subsidies (all from the domestic production account). From this income are deducted net payments of income and miscellaneous transfers to overseas to yield national disposable income. The disbursements side of the account shows this disposable income as being used for final consumption expenditure with the balance being 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, consumption of fixed capital transferred from the domestic production account and savings transferred from the national income and outlay account (or from the sector income and outlay accounts). On the payments side are purchases by all sectors of 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. Net lending to overseas is also the balance on current transactions in the overseas transactions account.

The **overseas transactions account** records all current transactions between Australian and overseas residents. Although this current account represents 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 and labour income received from overseas and unrequited transfers from overseas. These receipts are used for Australia's imports of goods and services and payments of property and labour income and unrequited 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. Net lending to overseas also differs from the balance on current account shown in balance of payments statistics because of the differing treatments adopted for undistributed company income (which is described as reinvested earnings in balance of payments publications).

Estimates at constant prices

In addition to providing an overview of total economic activity, the national accounts provide information on the relationships between different parts of the economy and also on changes in individual components and their relationships with each other over time. One of the difficulties involved in interpreting the impact of changes from one period to another is that any observed movement is generally a combination of a change in price and a change in quantity. In many cases, interest lies in the changes in physical quantity underlying the dollar value of transactions. Consequently, the development of series adjusted to remove the effect of price changes is an important extension to a national accounting system. Estimates adjusted in this way are said to be at **constant prices,** whereas national accounting aggregates expressed in terms of the actual dollar values used in transactions are said to be at **current prices.**

An estimate of the change over time in the quantity of an individual commodity produced can be made simply by collecting data on the number of units produced, but the only practicable way in which quantities of diverse goods and services produced (or used) can be aggregated is in terms of money values, such as the value of output or the value of materials used. However, changes in money values may reflect nothing more than changes in the underlying prices. Making estimates at constant (or fixed) prices is the best way of having a common unit of measurement, while avoiding the direct effects of changing prices.

The current price value of a transaction may be expressed conceptually as the product of a price and a quantity. The value of the transaction at constant prices may then be thought of as being derived by substituting, for the current price, the corresponding price in the chosen base year. Aggregates at constant prices for each period are obtained by summing constant price values for individual transactions. In effect, quantities of the commodities involved in the transactions are combined using their prices in the base year as weights. Constant price estimates are presented in tables for gross domestic product, exports and imports of goods and services, and gross national expenditure and its principal components on the following pages.

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 accounting concepts, but some of it is not completely satisfactory in various respects, including coverage, concepts and timing. Estimates 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 couple of years because tabulations of income tax statistics become available progressively one to two years after the end of each financial year.

National Income and Expenditure Tables

The figures shown in the following tables are consistent with data published in *Budget Related Paper No. 2: National Income and Expenditure, 1989–90* (5213.0) and *Australian National Accounts: National Income and Expenditure, June Quarter 1990* (5206.0).

NATIONAL INCOME AND OUTLAY ACCOUNT
($ million)

	1987–88	*1988–89*	*1989–90*
Wages, salaries and supplements	147,624	165,767	184,248
Net operating surplus	65,321	80,340	85,976
Domestic factor incomes	*212,945*	*246,107*	*270,224*
Less Net income paid overseas	9,949	12,911	15,732
Indirect taxes	40,795	44,718	47,326
Less Subsidies	3,830	4,060	4,296
National income	*239,961*	*273,854*	*297,522*
Less Net unrequited transfers to overseas	–1,664	–2,198	–2,426
National disposable income	**241,625**	**276,052**	**299,948**
Final consumption expenditure—			
Private	175,222	194,777	216,137
Government	52,490	56,278	60,523
Saving	13,913	24,997	23,288
Disposal of income	**241,625**	**276,052**	**299,948**

DOMESTIC PRODUCTION ACCOUNT
($ million)

	1987–88	1988–89	1989–90
Final consumption expenditure—			
Private	175,222	194,777	216,137
Government	52,490	56,278	60,523
Gross fixed capital expenditure—			
Private	54,897	68,020	68,400
Public enterprises	9,951	10,992	12,145
General government	7,500	7,790	8,529
Increase in stocks	–427	3,798	4,318
Statistical discrepancy	–669	2,882	6,010
Gross national expenditure	*298,964*	*344,537*	*376,062*
Exports of goods and services	50,058	53,838	58,590
Less Imports of goods and services	52,599	60,783	66,025
Gross domestic product	**296,423**	**337,592**	**368,627**
Wages, salaries and supplements	147,624	165,767	184,248
Gross operating surplus—			
Private trading enterprises—			
Corporate	44,387	52,265	56,533
Unincorporated	33,359	40,242	43,631
Dwellings owned by persons	23,281	26,672	29,549
Public trading enterprises	12,232	13,630	14,825
General government	5,814	6,180	6,584
Financial enterprises	703	929	–665
Less Imputed bank service charge	7,942	8,751	9,108
Gross domestic product at factor cost	*259,458*	*296,934*	*325,597*
Indirect taxes less subsidies	36,965	40,658	43,030
Gross domestic product	**296,423**	**337,592**	**368,627**
Gross farm product	*11,321*	*13,637*	*14,269*
Gross non-farm product	*285,102*	*323,955*	*354,358*

NATIONAL CAPITAL ACCOUNT
($ million)

	1987–88	1988–89	1989–90
Consumption of fixed capital	46,513	50,827	55,373
Saving—			
Increase in income tax provisions	1,960	3,092	682
Undistributed income—			
Trading enterprises	–507	234	–960
Financial enterprises	–1,235	–300	–3,946
Household saving	10,256	13,713	18,903
Extraordinary insurance claims paid	..	..	300
General government surplus on current transactions	3,439	8,258	8,309
Finance of gross accumulation	**60,426**	**75,824**	**78,661**
Gross fixed capital expenditure—			
Private—			
Dwellings	12,965	18,530	19,744
Non-dwelling construction	12,676	14,838	16,159
Equipment	24,318	27,546	27,296
Real estate transfer expenses	4,938	7,106	5,201
Public enterprises	9,951	10,992	12,145
General Government	7,500	7,790	8,529
Total gross fixed capital expenditure	*72,348*	*86,802*	*89,074*
Increase in stocks—			
Private non-farm	233	3,503	879
Farm	56	222	2
Public marketing authorities	–860	115	3,091
Other public authorities	144	–42	346
Total increase in stocks	*–427*	*3,798*	*4,318*
Statistical discrepancy	–669	2,882	6,010
Net lending to overseas	–10,826	–17,658	–20,741
Gross accumulation	**60,426**	**75,824**	**78,661**

OVERSEAS TRANSACTIONS ACCOUNT
($ million)

	1987–88	1988–89	1989–90
Imports of goods and services	52,599	60,783	66,025
Interest, etc., to overseas	9,743	11,763	14,816
Dividends to overseas	1,768	3,046	3,695
Labour income to overseas	210	219	225
Unrequited transfers to overseas—			
Personal	783	855	898
General government	1,098	1,157	1,278
Net lending to overseas	−10,826	−17,658	−20,741
Use of current receipts	**55,375**	**60,165**	**66,196**
Exports of goods and services	50,058	53,838	58,590
Interest, etc., from overseas	1,288	1,583	2,207
Dividends from overseas	308	344	435
Labour income from overseas	176	190	212
Extraordinary insurance claims paid	..	..	150
Unrequited transfers from overseas—			
Personal	2,726	3,313	3,494
Income taxes	819	897	1,108
Current receipts from overseas	**55,375**	**60,165**	**66,196**

EXPENDITURE ON GROSS DOMESTIC PRODUCT AT AVERAGE 1984–85 PRICES
($ million)

	1987–88	1988–89	1989–90
Final consumption expenditure—			
Private	138,862	144,244	150,355
Government	44,182	44,762	45,725
Gross fixed capital expenditure—			
Private—			
Dwellings	10,527	12,948	12,428
Non-dwelling construction	9,936	10,839	11,014
Equipment	19,384	22,746	22,088
Real estate transfer expenses	2,936	3,379	2,460
Public enterprises	7,864	8,233	8,604
General government	6,237	6,154	6,340
Increase in stocks—			
Private non-farm	337	2,728	555
Farm	96	166	38
Public marketing authorities	−763	183	1,881
Other public authorities	119	−33	248
Statistical discrepancy	−497	2,172	4,270
Gross national expenditure	*239,220*	*258,521*	*266,006*
Exports of goods and services	42,734	43,180	45,795
Less Imports of goods and services	42,756	52,703	54,574
Gross domestic product	**239,198**	**248,998**	**257,227**
Gross farm product	*8,214*	*8,343*	*9,095*
Gross non-farm product	*230,984*	*240,655*	*248,132*

MAIN AGGREGATES AT CURRENT PRICES
($ million)

Year	1 Final consumption expenditure Private	2 Government	3 Private gross fixed capital expenditure	4 Public gross fixed capital expenditure	5 Increase in stocks	6 Statistical discrepancy	7 (1 to 6) Gross national expenditure	8 Exports of goods and services
1948–49	3,074	430	538	268	45	–23	4,332	1,142
1949–50	3,541	512	700	385	54	65	5,257	1,302
1950–51	4,320	695	999	555	125	–27	6,667	2,087
1951–52	5,164	940	1,215	742	377	104	8,542	1,481
1952–53	5,475	1,089	1,228	723	–294	–165	8,056	1,850
1953–54	6,013	1,048	1,421	735	109	–125	9,201	1,787
1954–55	6,540	1,127	1,595	787	166	67	10,282	1,702
1955–56	7,023	1,253	1,758	835	229	–50	11,048	1,734
1956–57	7,500	1,324	1,839	846	–45	–125	11,339	2,184
1957–58	7,866	1,380	1,998	886	56	–41	12,145	1,840
1958–59	8,271	1,499	2,072	978	253	–9	13,064	1,850
1959–60	9,084	1,609	2,364	1,078	168	145	14,448	2,144
1960–61	9,634	1,748	2,608	1,110	478	56	15,634	2,165
1961–62	9,936	1,891	2,509	1,317	–219	–123	15,311	2,462
1962–63	10,658	1,991	2,800	1,331	253	–83	16,950	2,483
1963–64	11,527	2,176	3,175	1,480	120	–78	18,400	3,149
1964–65	12,473	2,483	3,687	1,725	561	56	20,985	3,041
1965–66	13,268	2,831	3,957	1,898	109	29	22,092	3,125
1966–67	14,343	3,218	4,150	2,014	360	–38	24,047	3,472
1967–68	15,677	3,723	4,496	2,178	113	–136	26,051	3,559
1968–69	17,070	3,895	5,213	2,321	682	–88	29,093	3,882
1969–70	18,830	4,305	5,663	2,546	440	17	31,801	4,749
1970–71	20,830	4,904	6,397	2,734	441	–173	35,133	5,066
1971–72	23,158	5,596	6,963	3,150	17	–32	38,852	5,673
1972–73	25,987	6,348	7,726	3,270	–270	98	43,159	7,007
1973–74	30,711	7,931	9,125	3,805	1,166	852	53,590	7,880
1974–75	37,420	10,663	9,671	5,467	1,025	695	64,941	10,087
1975–76	44,753	13,200	12,174	6,247	176	–449	76,101	11,197
1976–77	51,131	15,306	14,397	6,578	1,129	–716	87,825	13,382
1977–78	56,892	17,172	15,455	7,129	–434	–401	95,813	14,213
1978–79	64,165	18,932	18,377	7,602	1,332	–1,282	109,126	16,859
1979–80	72,473	21,238	20,366	8,477	841	–1,618	121,777	21,959
1980–81	82,695	24,884	25,854	9,388	508	–949	142,380	22,505
1981–82	94,237	28,421	30,170	11,363	1,585	–3,427	162,349	23,300
1982–83	105,629	32,309	27,985	13,154	–2,434	–2,248	174,395	25,156
1983–84	116,396	35,820	30,178	14,192	1,398	–2,731	195,253	28,595
1984–85	127,870	40,202	35,957	15,113	1,080	–1,002	219,220	34,755
1985–86	143,369	44,735	41,389	18,015	1,481	–3,477	245,512	38,693
1986–87	157,159	48,705	45,038	19,095	–1,423	–1,836	266,738	43,148
1987–88	175,222	52,490	54,897	17,451	–427	–669	298,964	50,058
1988–89	194,777	56,278	68,020	18,782	3,798	2,882	344,537	53,838
1989–90	216,137	60,523	68,400	20,674	4,318	6,010	376,062	58,590

MAIN AGGREGATES AT CURRENT PRICES—*continued*
($ million)

Year	9	10	11	12	13	14	15	16
		(7+8–9) (11+13+14)		Gross operating surplus				
	Imports of goods and services	Gross domestic product	Wages salaries and supplements	Trading enterprises	Total	Indirect taxes less subsidies	National income	Household income
1948–49	979	4,495	2,205	1,819	1,862	428	3,986	3,787
1949–50	1,260	5,299	2,512	2,230	2,284	503	4,711	4,484
1950–51	1,726	7,028	3,163	3,223	3,294	571	6,316	6,140
1951–52	2,437	7,586	4,003	2,689	2,771	812	6,686	6,285
1952–53	1,312	8,594	4,329	3,376	3,477	788	7,547	7,036
1953–54	1,601	9,387	4,612	3,775	3,883	892	8,279	7,395
1954–55	1,983	10,001	5,050	3,861	3,974	977	8,778	7,929
1955–56	1,953	10,829	5,538	4,123	4,231	1,060	9,477	8,598
1956–57	1,736	11,787	5,858	4,621	4,736	1,193	10,334	9,171
1957–58	1,925	12,060	6,085	4,541	4,682	1,293	10,478	9,187
1958–59	1,960	12,954	6,381	5,088	5,229	1,344	11,256	9,889
1959–60	2,284	14,308	7,085	5,629	5,753	1,470	12,385	10,989
1960–61	2,590	15,209	7,634	5,890	6,013	1,562	13,128	11,796
1961–62	2,188	15,585	7,887	6,057	6,191	1,507	13,362	12,236
1962–63	2,596	16,837	8,361	6,687	6,846	1,630	14,456	13,049
1963–64	2,846	18,703	9,140	7,638	7,807	1,756	16,159	14,536
1964–65	3,447	20,579	10,253	8,210	8,387	1,939	17,802	15,896
1965–66	3,588	21,629	11,086	8,183	8,420	2,123	18,582	16,697
1966–67	3,673	23,846	12,118	9,198	9,475	2,253	20,502	18,511
1967–68	4,115	25,495	13,212	9,527	9,824	2,459	21,841	19,483
1968–69	4,250	28,725	14,627	11,050	11,381	2,717	24,694	21,847
1969–70	4,728	31,822	16,452	12,035	12,382	2,988	27,290	24,126
1970–71	5,083	35,116	18,884	12,569	12,999	3,233	30,091	26,943
1971–72	5,232	39,293	21,077	14,070	14,550	3,666	33,623	30,437
1972–73	5,382	44,784	23,562	16,586	17,116	4,106	38,411	34,928
1973–74	7,883	53,587	28,894	19,133	19,590	5,103	46,309	42,722
1974–75	10,359	64,669	37,160	20,768	21,300	6,209	55,259	53,049
1975–76	10,901	76,397	42,790	24,631	25,584	8,023	64,800	61,812
1976–77	13,924	87,283	48,315	29,008	29,940	9,028	73,783	71,051
1977–78	15,176	94,850	53,047	31,479	32,247	9,556	79,442	78,240
1978–79	17,964	108,021	57,053	38,670	39,879	11,089	90,586	87,590
1979–80	21,091	122,645	63,616	44,755	45,905	13,124	102,390	97,755
1980–81	25,071	139,814	74,028	49,901	50,787	14,999	116,574	111,631
1981–82	28,997	156,652	85,530	53,585	54,085	17,037	129,497	127,866
1982–83	28,967	170,584	94,910	55,477	56,314	19,360	139,246	140,812
1983–84	31,192	192,656	100,317	69,368	69,969	22,370	157,882	156,486
1984–85	39,505	214,470	110,681	78,755	77,986	25,803	175,208	172,675
1985–86	46,087	238,118	122,182	88,647	87,487	28,449	192,772	191,905
1986–87	48,017	261,869	133,961	97,896	96,345	31,563	210,838	211,418
1987–88	52,599	296,423	147,624	113,259	111,834	36,965	239,961	234,090
1988–89	60,783	337,592	165,767	132,809	131,167	40,658	273,854	264,816
1989–90	66,025	368,627	184,248	144,538	141,349	43,030	297,522	295,517

GROSS DOMESTIC PRODUCT AT AVERAGE 1984–85 PRICES
($ million)

Year	Final consumption expenditure — Private	Final consumption expenditure — Government	Gross fixed capital expenditure — Private	Gross fixed capital expenditure — Public — Public enterprises	Gross fixed capital expenditure — Public — General government	Increase in stocks	Statistical discrepancy	Gross national expenditure	Plus exports of goods and services	Less imports of goods and services	Gross domestic product
1948–49	32,875	7,844	6,214	3,361		619	–267	50,646	5,806	6,289	50,163
1949–50	34,870	8,478	7,356	4,435		309	699	56,147	6,151	7,617	54,681
1950–51	37,476	9,535	8,821	5,612		1,005	–252	62,197	5,865	9,087	58,975
1951–52	37,268	10,784	8,808	6,395		2,713	819	66,787	5,337	10,318	61,806
1952–53	36,387	11,287	8,076	5,612		–1,972	–1,187	58,203	6,598	5,954	58,847
1953–54	38,874	10,502	9,112	5,477		744	–868	63,841	6,488	7,777	62,552
1954–55	41,435	10,868	9,837	5,667		1,022	453	69,282	6,647	9,455	66,474
1955–56	42,743	11,127	10,189	5,761		1,359	–321	70,858	7,216	8,948	69,216
1956–57	43,121	11,348	10,296	5,616		–230	–762	69,389	8,136	7,648	69,877
1957–58	44,559	11,539	10,916	5,812		401	–246	72,981	7,266	8,405	71,842
1958–59	45,942	12,439	11,223	6,328		1,466	–53	77,345	8,279	8,650	76,974
1959–60	49,010	11,942	12,804	6,761		793	864	82,174	8,969	10,392	80,751
1960–61	49,903	12,442	13,736	6,787		2,259	305	85,432	9,413	11,717	83,128
1961–62	51,184	13,107	13,029	7,819		–924	–677	83,538	10,678	9,983	84,233
1962–63	54,325	13,607	14,454	7,829		1,257	–444	91,028	10,451	11,726	89,753
1963–64	57,798	14,233	16,142	8,490		650	–400	96,913	12,152	13,007	96,058
1964–65	60,478	15,491	18,077	9,522		2,395	299	106,262	12,121	15,518	102,865
1965–66	62,315	17,150	18,939	10,203		560	154	109,321	12,277	15,908	105,690
1966–67	65,324	18,506	19,257	10,394		1,429	–177	114,733	13,656	16,126	112,263
1967–68	69,093	20,453	20,379	10,854		784	–625	120,938	14,497	18,054	117,381
1968–69	73,167	20,419	22,651	11,148		2,689	–378	129,696	15,566	18,635	126,627
1969–70	77,937	21,353	23,886	11,695		2,099	108	137,078	18,283	20,573	134,788
1970–71	81,184	22,180	25,723	11,862		1,536	–667	141,818	20,072	20,425	141,465
1971–72	84,511	23,060	26,139	12,686		–935	–98	145,363	21,595	19,774	147,184
1972–73	89,225	23,868	26,972	12,366		–1,135	410	151,706	22,040	20,012	153,734
1973–74	94,085	25,579	27,940	12,611		3,447	2,759	166,421	20,686	26,268	160,839
1974–75	96,237	27,677	24,069	7,039	7,488	2,874	1,906	167,290	22,600	27,022	162,868
1975–76	99,384	29,700	25,982	6,514	7,843	144	–920	168,647	23,468	25,395	166,720
1976–77	101,802	30,770	27,523	6,532	6,983	2,355	–1,328	174,637	25,070	28,222	171,485
1977–78	103,731	31,830	26,983	6,845	6,716	–934	–661	174,510	25,659	27,094	173,075
1978–79	107,356	32,921	29,697	7,182	6,334	2,413	–2,077	183,826	27,225	29,339	181,712
1979–80	109,929	33,534	30,120	7,642	5,839	1,445	–2,407	186,102	29,256	29,233	186,125
1980–81	114,253	35,014	34,451	8,065	5,365	700	–1252	196,596	27,804	31,938	192,462
1981–82	118,990	35,346	36,506	9,241	5,233	1,749	–4,215	202,850	28,135	35,539	195,446
1982–83	120,319	36,321	30,807	9,563	5,144	–2,560	–2,507	197,087	28,216	32,504	192,799
1983–84	123,430	37,951	31,768	9,437	5,564	1,775	–2,867	207,058	30,606	34,189	203,475
1984–85	127,870	40,202	35,957	8,886	6,227	1,080	–1,002	219,220	34,755	39,505	214,470
1985–86	132,414	42,067	37,075	9,781	6,738	1,222	–3,166	226,131	36,810	40,082	222,859
1986–87	133,472	43,090	36,985	9,446	6,897	–1,127	–1,526	227,237	40,051	38,948	228,340
1987–88	138,862	44,182	42,783	7,864	6,237	–211	–497	239,220	42,734	42,756	239,198
1988–89	144,244	44,762	49,912	8,233	6,154	3,044	2,172	258,521	43,180	52,703	248,998
1989–90	150,355	45,725	47,990	8,604	6,340	2,722	4,270	266,006	45,795	54,574	257,227

NOTE: Estimates prior to 1974–75 have been derived from estimates valued at the average prices of earlier base years.

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26

FOREIGN TRANSACTIONS

This chapter includes statistics of foreign trade, balance of payments, foreign investment and foreign participation in enterprises in Australia.

FOREIGN TRADE

Introduction

Foreign trade statistics provide essential information about Australia's balance of trade and important details about goods traded with the rest of the world.

Governments use the statistics to formulate and monitor trade and budgetary policies.

Some details of Australian trade policy objectives and the international and bilateral trade agreements and arrangements are included in the 1989 and earlier issues of the *Year Book*.

Importers, exporters, manufacturers and shipping companies use foreign trade statistics to:

- monitor import penetration and export performance;
- examine the transport implications of commodity markets; and
- monitor commodity price and volume changes.

Additionally, foreign trade statistics are used in the production of other ABS statistics, including:

- balance of payments;
- national accounts;
- shipping and air cargo commodity statistics;
- aggregates of international trade published at constant prices;
- export, import and terms of trade indexes; and
- wholesale prices, constant price estimates, input/output and agricultural statistics.

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 (ACS) as required by the Customs Act.

The ACS performs amongst other things, import/export and barrier control functions. This involves monitoring the arrival and departure of all international vessels, their crews and cargoes and items mailed from overseas to ensure that goods are brought to account and not delivered without authority and to prevent the importation and exportation of prohibited goods.

For cargoes arriving in and departing from Australia, importers, exporters or their agents are required to lodge, either electronically or on paper, documentation which includes information about the type, quantity and value of goods being imported or exported. This information is used by the ACS to assess and collect Customs duty and other revenue payable on imported and exported goods and to facilitate the monitoring and control of the physical movement of goods into and out of Australia. Once the ACS has finalised processing this documentation for its own purposes, the information is passed on to the ABS for statistical processing. More detailed information on the activities of the ACS can be obtained from its reports and papers.

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 parcel 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) ships and aircraft engaged in the transport of passengers or goods between Australia and other countries;

(e) the sale or purchase of certain ships intended for use on overseas routes;

(f) the sale or purchase, prior to 1 July 1987, of certain aircraft intended for use on overseas routes. From 1 July 1987, purchases of all aircraft (and parts and components) intended for use on overseas routes are included in recorded import statistics. Sales of aircraft (and parts and components) which were imported into Australia on or after 1 July 1987 for use on overseas routes are included in recorded export statistics;

(g) fish and other sea products landed in Australia or abroad directly from the high seas by Australian ships;

(h) from 1 July 1986, export consignments where the value of the goods in each transaction is less than $500. Prior to that date, transactions below $250 were excluded;

and for imports only:

(i) entries lodged on informal clearance documents (ICDs) for values not exceeding $250. In addition, from 21 October 1985 onwards, ICDs for postal articles valued up to $1,000 are excluded; and

(j) bunkers and stores supplied to ships and aircraft prior to arrival in Australia.

Statistical period

Exports

Historically, paper documents relating to exports have been lodged by exporters or their agents with the ACS. This system of lodgment is referred to as the 'paper-based' system of lodgment.

Exports lodged under this paper-based system are generally recorded statistically in the month the entries are processed by the ACS. 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 ACS 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 lodged via the paper-based system are recorded on periodic returns. The processing 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 main ports the processing month is the calendar month. The way in which exports data lodged via the paper-based system are collected and processed, means that approximately 40 per cent of total export trade by value for a particular month reflects actual shipments during that month, 55 per cent by value was actually exported during the previous month with the remaining five per cent by value exported in earlier months. For individual commodities these percentages may vary considerably.

Introduction of EXIT (Exports Integration)

On 12 December 1988, the ACS commenced the progressive implementation of EXIT, a new system for electronically processing and recording export information and for clearance of outward sea and air cargo manifests.

The EXIT system will lead to an improvement in the timing basis used in compiling export statistics. Under EXIT, exports will be recorded in the month of shipment rather than in the month the export documents are processed by the ACS. Consequently, foreign trade export statistics will more accurately reflect actual shipments during that month.

In order to maintain a consistent time series while EXIT is being progressively introduced, export information reported electronically is adjusted to record it in foreign trade export statistics in the statistical period in which it would have been recorded under the paper-based system. This adjustment will be made for an interim period. After EXIT is fully operational the foreign trade export series will be compiled on a shipping date basis.

Imports

Imports are recorded statistically in the calendar month in which the import entries are finalised by the ACS. 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. The way in which imports data are collected and processed means that approximately 70 per cent of total import trade by value recorded for a particular month reflects actual shipments during that month, 25 per cent was actually imported during the previous month with the remaining five per cent being imported in earlier months. For individual commodities these percentages may vary considerably.

State

For exports, State is defined as the State in which the final stage of production or manufacture occurs.

For imports, the State is that in which the import entry was lodged with the ACS. The State of lodgement is not necessarily the State of discharge of the goods. Goods forwarded interstate after import, whether in containers or not, are recorded as being imported in the State 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 dispatched for sale. The recorded value of exports includes the value of the outside package, other than international containers used for containerised cargo. Exporters who do not know the value of the goods at the time of shipment and enter an approximate value must subsequently submit an entry either confirming or revising the estimated return.

Imports

The recorded value of imports is the customs value (formerly referred to as the value for duty). On 30 November 1981, Australia adopted the GATT Agreement on Customs Valuation. The Agreement reflects one of a number of trade related codes of conduct established during the round of Multilateral Trade Negotiations concluded in 1979. 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 GATT Agreement offers a set of practical rules 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). However, the place of exportation need not be the port of shipment. Up until 30 June 1989, and depending on the contractual arrangements made for the transport of the goods, the place of exportation may be ex-factory, point of containerisation, customs frontier or port of shipment. From 1 July 1989, the introduction of the *Customs and Excise Legislation Amendment Act 1989* has restricted the choice of the place of exportation for customs valuation purposes so that customs value includes at least all charges incurred up to the point of containerisation. As for exports, the recorded value of imports includes the value of outside packages other than international containers used for containerised cargo. For details of the method of valuation used prior to 30 November 1981, *see Year Book* No. 66.

Merchandise exports and imports

In accordance with standards recommended by the United Nations:

(a) *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, for example, goods for temporary exhibition outside Australia.

(b) *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, for example, goods for temporary exhibition in Australia.

From July 1985, non-merchandise trade is excluded from Australia's export and import statistics. This is in accordance with United Nations' recommendations and practices adopted by Australia's major trading partners. Statistics for periods prior to July 1985 included in this publication have been adjusted to be comparable with data from July 1985 onwards.

For periods prior to 1 July 1987, trade in gold coins, whether or not they are legal tender, and other coins which are legal tender is classified as non-merchandise trade; for periods from 1 July 1987 these commodities are excluded from non-merchandise trade and are included in total exports and imports. The explanation for the change and for purposes of comparison, exports and imports data by country for 1985–86, 1986–87 and 1987–88 are shown in Appendix A of the January 1989 issue of *Exports, Australia, Monthly Summary Tables* (5432.0).

Commodity classifications

Up until the end of December 1987, Australia's customs tariff was based on the *Customs Co-operation Council Nomenclature* (CCCN), an international classification for describing goods for customs and other purposes. From 1 January 1988, Australia's customs tariff has been based on the *Harmonized Commodity Description and Coding System* (HCDCS) or *Harmonised System* (HS). The HS is a modernisation, reorganisation and extension of the CCCN.

To coincide with the introduction of the HS, Australia also adopted, from 1 January 1988, the third revision of the *Standard International Trade Classification* (SITC). This replaced the second revision of the SITC. The third revision of the SITC incorporates significant changes to the numbering system and overall structure to align it more closely with the HS.

Commodity statistics for 1986–87 and 1987–88 shown in this issue of the *Year Book* are presented according to the divisions of the second revision of the SITC, while those for 1988–89 are presented according to the third revision of the SITC.

Consequently, commodity statistics for 1988–89 are not fully comparable to those for earlier years. However, differences are significant only for a few divisions. A comparison of 1988–89 data compiled on a SITC (Rev2) and a SITC (Rev3) basis is provided in Appendix B of *Foreign Trade, Australia, Comparative Summary Tables, 1988–89* (5410.0) along with an explanation of the major differences.

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 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)* in which they are typically produced.

The ASCC manual was last released in respect of the financial year 1984–85. Since then a complete review of manufacturing commodity items has been undertaken and it is planned to publish these new items in the *Australian Manufacturing Production Commodity Classification* (AMPCC). The AMPCC will contain a detailed set of linkages to the trade classifications to facilitate comparison. In view of this, the content of future editions of the ASCC is currently being examined. (*See* Chapter 18, Manufacturing, Retail Trade and Service Industries.)

Industry of origin

Export and import statistics are classified according to subdivisions of the *Australian Standard Industry Classification* (ASIC). The statistics are compiled by allocating statistical items of the appropriate export or import commodity classification 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 of Broad Economic Categories (BEC). 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

For the purposes of foreign trade statistics, 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 while 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 it was found to be impossible to determine the destination, goods are recorded 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. Where it is found to be impossible to determine the origin, goods are recorded as *Origin unknown.*

Quantity data

Where quantities are shown, they are as specified in the appropriate export or import commodity classification which are generally expressed in terms of the normal unit of quantity used in the appropriate industry. 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 publication *Balance of Payments, Australia: Summary of Concepts, Sources and Methods* (5351.0).

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.

Foreign Trade Statistics

Total foreign trade

The following table shows the total Australian trade with foreign countries from 1983–84 to 1988–89.

FOREIGN TRADE(a)
($ million)

Year	*Exports*	*Imports*	*Excess of exports (+) or imports (-)*
1983–84	24,013	23,540	+473
1984–85	29,708	29,049	+659
1985–86	32,795	34,691	-1,896
1986–87	35,806	36,988	-1,182
1987–88	41,078	40,597	+481
1988–89	43,462	47,064	-3,602

(a) For periods from 1 July 1987, trade in gold coins, whether or not they are legal tender, and other coins which are legal tender is included in total exports and total imports. For periods prior to 1 July 1987 these commodities are included in non-merchandise trade.

The following table shows particulars of non-merchandise trade for recent years.

NON-MERCHANDISE TRADE(a)
($ million)

Year	*Exports*	*Imports*
1983–84	753	521
1984–85	834	971
1985–86	1,418	1,045
1986–87	1,393	1,176
1987–88	1,484	1,343
1988–89	1,621	1,039

(a) For periods prior to 1 July 1987, trade in gold coins, whether or not they are legal tender, and other coins which are legal tender is included in non-merchandise trade. For periods from 1 July 1987 these commodities are included in total exports and total imports.

Classified summary of Australian foreign trade

The following table shows exports and imports according to divisions of the SITC. Data for the period January to June 1988, while collected according to the codes of the HS, have been recompiled on the basis of SITC (Rev2), so as to present annual figures for 1986–87 and 1987–88 on a comparable basis. Data for 1988–89 has been classified according to the SITC (Rev3).

See the section on Commodity Classification in this chapter for details.

EXPORTS AND IMPORTS ACCORDING TO DIVISIONS OF THE SITC(a)
($ million)

	Exports			Imports		
Divisions of the SITC Rev 3	*1986–87*	*1987–88*	*1988–89*	*1986–87*	*1987–88*	*1988–89*
00 Live animals other than fish, crustaceans, molluscs and aquatic invertebrates	319.3	299.4	301.7	112.8	147.3	156.4
01 Meat and meat preparations	2,248.9	2,558.8	2,249.3	16.3	19.2	30.3
02 Dairy products and birds' eggs	467.2	503.2	566.6	80.9	87.4	91.1
03 Fish (not marine mammals), crustaceans, molluscs and aquatic invertebrates, and preparations thereof	599.8	732.0	594.0	422.6	409.3	437.5
04 Cereals and cereal preparations	2,792.6	2,297.2	2,742.2	72.8	73.9	72.1
05 Vegetables and fruit	550.6	603.1	525.8	271.4	282.3	375.1
06 Sugars, sugar preparations and honey	715.9	719.8	925.1	28.3	33.7	43.6
07 Coffee, tea, cocoa, spices, and manufactures thereof	65.3	63.8	64.8	404.9	378.6	352.5
08 Feeding stuff for animals (excl. unmilled cereals)	210.3	247.1	266.7	54.5	50.6	73.0
09 Miscellaneous edible products and preparations	47.9	75.5	94.8	147.1	186.5	201.3
11 Beverages	132.8	225.0	228.3	210.7	234.1	281.6
12 Tobacco and tobacco manufactures	18.6	23.4	20.5	116.1	110.5	92.4
21 Hides, skins and furskins, raw	542.3	687.4	498.1	3.8	9.9	12.5
22 Oil seeds and oleaginous fruits	40.4	30.0	70.1	9.6	18.6	49.8
23 Crude rubber (incl. synthetic and reclaimed)	5.6	7.2	15.8	87.7	99.5	113.7
24 Cork and wood	361.1	394.9	424.2	297.5	382.4	561.3
25 Pulp and waste paper	27.6	31.5	37.0	171.1	224.8	224.1
26 Textile fibres and their wastes (not manufactured into yarn or fabric)*(a)*	3,870.1	5,600.3	6,254.1	150.4	164.9	179.1
27 Crude fertilisers (excl. those of Division 56) and crude minerals (excl. coal, petroleum and precious stones)	103.0	173.9	233.7	224.2	248.2	282.5
28 Metalliferous ores and metal scrap*(b)*	4,849.7	5,284.6	6,345.2	38.9	68.9	77.8
29 Crude animal and vegetable materials, nes	97.4	118.4	123.6	100.0	104.3	107.5
32 Coal, coke and briquettes	5,456.1	4,849.1	4,744.0	2.8	5.1	11.1
33 Petroleum, petroleum products and related materials	1,621.8	1,942.5	1,464.2	1,742.3	2,040.2	2,000.0
34 Gas, natural and manufactured	230.9	245.2	161.2	4.3	4.8	3.7
41 Animal oils and fats	89.6	117.1	105.0	2.0	1.5	2.9
42 Fixed vegetable fats and oils, crude, refined or fractionated*(b)*	22.9	12.6	10.7	64.3	89.7	101.5
43 Fats and oils (processed), waxes and inedible mixtures or preparations, of animal or vegetable origin, nes*(c)*	11.4	8.4	10.6	25.2	16.6	12.9
51 Organic chemicals*(c)*	50.8	96.0	96.9	881.0	1,106.6	1,164.3
52 Inorganic chemicals*(b)(c)*	66.1	78.9	91.5	321.6	515.3	683.1
53 Dyeing, tanning and colouring materials*(c)*	35.2	82.5	140.5	189.0	195.0	217.3
54 Medicinal and pharmaceutical products*(b)*	166.3	205.0	232.6	508.0	646.8	694.1
55 Essential oils and resinoids and perfume materials; toilet, polishing and cleansing preparations	57.2	75.9	94.5	241.4	269.4	292.1
56 Fertilisers (excl. crude)	5.3	7.1	7.2	139.8	138.0	213.5
57 Plastics in primary forms*(a)(c)*	5.4	6.5	148.0	14.1	30.4	717.0
58 Plastics in non-primary forms*(a)(c)*	136.7	168.4	60.1	783.9	924.2	444.9
59 Chemical materials and products, nes*(c)*	141.8	171.0	194.9	393.8	450.1	560.9
61 Leather, leather manufactures, and dressed furskins, nes	118.5	172.0	146.8	151.6	168.0	150.7
62 Rubber manufactures, nes*(c)*	42.7	66.4	65.7	461.9	571.1	682.3
63 Cork and wood manufactures (excl. furniture)*(b)*	9.2	12.9	11.4	169.1	188.7	233.3
64 Paper, paperboard, and articles of paper pulp, of paper or of paperboard*(b)(c)*	103.9	98.8	123.1	1,012.7	1,206.1	1,296.5
65 Textile yarn, fabrics, made-up articles, nes, and related products*(a)(c)*	245.7	311.7	151.8	1,831.1	1,926.3	1,999.4

For footnotes *see* end of table.

EXPORTS AND IMPORTS ACCORDING TO DIVISIONS OF THE SITC(a)—*continued*
($ million)

	Exports			*Imports*		
Divisions of the SITC Rev 3	*1986–87*	*1987–88*	*1988–89*	*1986–87*	*1987–88*	*1988–89*
66 Non-metallic mineral manufactures, nes*(b)(c)*	174.8	256.7	337.4	712.5	849.5	966.1
67 Iron and steel	590.8	506.7	497.1	634.4	835.7	1,077.9
68 Non-ferrous metals*(b)*	2,311.7	3,252.1	4,163.5	202.9	249.7	358.7
69 Manufactures of metals, nes*(c)*	243.5	276.7	326.8	1,008.9	1,133.1	1,191.8
71 Power generating machinery and equipment	295.6	350.6	311.0	1,216.8	1,210.4	1,126.0
72 Machinery specialised for particular industries*(c)*	305.7	313.1	339.0	1,735.4	1,988.3	2,360.3
73 Metal working machinery	25.8	38.1	37.5	481.2	383.4	375.7
74 General industrial machinery and equipment, nes and machine parts, nes*(c)*	236.7	286.0	334.8	1,984.1	2,289.2	2,522.9
75 Office machines and automatic data processing machines	390.0	440.2	398.4	2,558.1	2,646.5	3,326.6
76 Telecommunications and sound recording and reproducing apparatus and equipment	87.7	116.4	162.6	1,497.0	1,508.3	1,717.8
77 Electrical machinery, apparatus, appliances, parts (incl. non-elec. counterparts of electrical domestic equip)	255.5	289.9	287.2	1,885.8	2,142.3	2,359.3
78 Road vehicles (incl. air-cushion vehicles)	438.2	524.8	404.6	2,719.5	3,139.1	4,806.9
79 Transport equipment (excl. road vehicles)	576.6	372.7	421.5	1,311.6	1,061.0	2,038.8
81 Prefabricated buildings; sanitary, plumbing, heating and lighting fixtures and fittings, nes	15.6	14.0	27.3	75.4	97.8	124.6
82 Furniture, parts thereof; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings	33.7	40.8	36.9	235.3	254.9	284.9
83 Travel goods, handbags and similar containers	4.2	4.3	4.8	179.7	186.6	190.5
84 Articles of apparel and clothing accessories	38.8	58.1	64.0	656.6	721.2	759.1
85 Footwear	9.4	10.1	15.4	250.8	269.8	338.1
87 Professional, scientific and controlling instruments and apparatus, nes	176.6	215.4	196.4	907.0	960.8	1,066.1
88 Photographic apparatus, equipment and supplies and optical goods, nes; watches and clocks*(c)*	249.6	277.4	263.3	720.0	716.5	782.2
89 Miscellaneous manufactured articles, nes*(c)*	325.7	405.9	437.7	2,160.2	2,367.5	2,882.9
93 Special transactions and commodities not classified according to kind	n.a.	n.a.	150.7	n.a.	n.a.	752.2
95 Gold coin whether or not legal tender, and other coin being legal tender*(d)*	n.a.	118.1	242.6	n.a.	2.0	20.1
96 Coin (excl. gold coin), not being legal tender	n.a.	n.a.	1.3	n.a.	n.a.	0.3
97 Gold, non-monetary (excl. gold ores and concentrates)	n.a.	n.a.	2,487.4	n.a.	n.a.	150.6
98 Combined confidential items of trade*(e)*	n.a.	n.a.	870.7	n.a.	n.a.	187.0
Total Trade*(f)*	**35,806.4**	**41,077.8**	**43,462.2**	**36,988.1**	**40,596.6**	**47,064.2**

(a) Data through 1987-88 are classified according to the SITC Revision 2. From 1988-89 SITC Revision 3 has been adopted. Divisions significantly affected by the change in classification are footnoted. *See* Appendix B of the 1988–89 issue of the 5410.0 publication for details. *(b)* Excludes export commodities subject to a confidentiality restriction. These are included in Division 98. *See* Appendix D of the 1988–89 issue of the 5410.0 publication for details. *(c)* Excludes import commodities subject to a confidentiality restriction. These are included in Division 98. *See* Appendix E of the 1988–89 issue of the 5410.0 publication for details. *(d)* Division 95 is a dummy SITC Rev3 code used to record the value of these commodities as merchandise trade. Trade in these commodities was previously recorded as non-merchandise trade. *See* Appendix A of the 1988–89 issue of the 5410.0 publication for details. *(e)* Includes export and import commodities subject to a confidentiality restriction. *See* Appendixes D and E of the 1988–89 issue of the 5410.0 publication for details. *(f)* Includes exports and imports of gold coins, whether or not they are legal tender and other coins which are legal tender. *See* Appendix A of the 1988–89 issue of the 5410.0 publication for details.

EXPORTS OF MAJOR COMMODITIES BASED ON STANDARD INTERNATIONAL TRADE CLASSIFICATIONS (SITC) REV3, 1988–89

Commodity Description	*$ million*
Aircraft and associated equipment; spacecraft (incl. satellites) and spacecraft launch vehicles; and parts thereof (792)	275.1
Alumina (aluminium oxide) (285.20)	2,220.3
Aluminium (684)	2,720.2
Barley, unmilled (043.00)	232.0
Cars and other road vehicles (incl. air-cushioned vehicles) (78)	404.6
Cheese and curd (024)	183.4
Coal, whether or not pulverised but not agglomerated (321)	4,645.6
Copper ores and concentrates (283.10)	209.0
Copper and copper alloys, unwrought (excl. master alloys) (682.11,12,14)	369.4
Cotton (other than linters), not carded or combed (263.10)	462.8
Crustaceans, molluscs and aquatic invertebrates (036)	465.0
Fruit and nuts, fresh, dried or preserved and fruit preparations (incl. fruit juices) (057-059)	313.4
Gas, natural and manufactured (34)	161.2
Gold, non-monetary (excl. gold ores and concentrates) (971)	2,487.4
Hides and skins, bovine and equine, raw(211.11,12,13,20)	274.2
Iron and steel (67)	497.1
Iron ore concentrates and agglomerates (excl. roasted iron pyrites) (281.50,60)	1,775.7
Lead and lead alloys, unwrought (685.11,12)	345.4
Machinery specialised for particular industries (72)	339.0
Meat of bovine animals (fresh, chilled or frozen) (011.11-22)	1,770.1
Meat of sheep and goats (fresh, chilled or frozen) (012.11-13)	262.3
Milk and cream and milk products other than butter or cheese (022)	314.1
Nickel and nickel alloys, unwrought (683.11,12)	232.4
Nickel oxide sinters (284.22)	336.3
Office machines and automatic data processing machines (75)	398.4
Ores and concentrates of molybdenum, niobium, titanium etc (287.81-85)(a)	515.1
Petroleum oils and oils obtained from bituminous minerals, crude (333)	563.6
Petroleum products (334,335)	900.6
Photographic and cinematographic supplies (882)	186.7
Plastics in primary and non-primary form (57,58)	208.1
Power generating machinery and equipment (71)	311.0
Rice (042)	150.0
Sheep and goats, live (001.21,22)	205.7
Skins, sheep and lamb, with wool on, raw (211.60)	204.2
Sorghum, unmilled (045.30)	41.6
Sugar, beet or cane, raw, in solid form (061.11,12)	854.5
Uranium and thorium ores and concentrates (286.10,20)	415.3
Wheat (incl. spelt) and meslin, unmilled (041)	2,108.8
Wood, in chips or particles (246.11,15)	406.8
Wool, greasy (incl. fleece-washed wool) (268.11,19)	4,604.9
Wool, other, not carded or combed (268.21,29)	929.9
Zinc and zinc alloys, unwrought (686.11,12)	357.1
Zinc ores and concentrates (287.50)	424.3
Total major commodities(a)	*35,082.0*
Total Exports*(b)*	**43,462.2**

(a) Excludes commodities subject to a No Commodity Details restriction. *See* Appendix E of the 1988–89 issue of the 5410.0 publication for details. *(b)* Total exports includes exports of gold coins, whether or not they are legal tender, and other coins which are legal tender. *See* Appendix A of the 1988–89 issue of the 5410.0 publication for details.

IMPORTS OF MAJOR COMMODITIES BASED ON STANDARD INTERNATIONAL TRADE CLASSIFICATIONS (SITC) REV3, 1988–89

Commodity Description	*$ million*
Aircraft and associated equipment; spacecraft (incl.satellites) and spacecraft launch vehicles; and parts thereof (792)	1,653.1
Articles of apparel and clothing accessories (84)	759.1
Automatic data processing machines and units thereof (752)	1,961.1
Baby carriages, toys, games and sporting goods (894)	419.8
Chemical materials and products, nes (59)(a)	560.9
Civil engineering and contractors' plant and equipment (723)(a)	690.5
Clay and refractory construction materials and mineral manufactures, nes (662,663)	356.0
Coffee and coffee substitutes (071)	157.2
Electrical apparatus for switching or protecting electrical circuits (772)	482.0
Electrical machinery and apparatus nes (778)	696.6
Fish, crustaceans, molluscs and aquatic invertebrates, and preparations thereof (03)	437.5
Glass, glassware and pottery (664,665,666)(a)	388.0
Household type, electrical and non-electrical equipment nes (775)	429.7
Inorganic chemicals (52)(a)	683.1
Internal combustion piston engines, and parts thereof nes (713)	607.4
Iron and steel (67)	1,077.9
Machinery and equipment specialised for particular industries and parts thereof (728)	543.8
Manufactures of base metals nes (699)	413.6
Measuring, checking, analysing and controlling instruments and apparatus nes (874)	814.3
Medical and pharmaceutical products (54)	694.1
Motor vehicles for the transport of goods (782.10)	1,260.2
Non-electrical parts and accessories of machinery nes (749)	118.7
Organic chemicals (51)(a)	1,164.3
Paper, paperboard and articles of paper pulp, of paper or of paperboard (64)(a)	1,296.5
Parts and accessories of motor vehicles and tractors, track-laying and wheeled (784)	959.0
Parts and accessories for office and automatic data processing machines (759)	1,016.5
Passenger motor vehicles (other than public transport type vehicles) incl. station wagons and racing cars (781)	2,231.1
Petroleum oils and oils obtained from bituminous minerals, crude (333)	994.5
Petroleum oils and oils obtained from bituminous minerals (other than crude) (334)	876.3
Photographic and cinematographic supplies (882)(a)	315.9
Plastics in primary and non-primary forms (57,58)(a)	1,161.9
Printed matter (892)	640.3
Printing and bookbinding machinery, and parts thereof (726)	247.3
Pumps, centrifuges, filtering or purifying apparatus and parts thereof (743)	502.4
Rubber tyres, interchangeable tyre treads, tyre flaps and inner tubes for wheels of all kinds (625)	450.5
Ships, boats (including hovercraft) and floating structures (793)	311.8
Telecommunication equipment nes and parts nes and accessories (764)	905.3
Television and radio broadcast receivers (761,762)	436.1
Textile yarn (651)(a)	563.7
Tools for use in the hand or in machines (695)(a)	308.4
Tractors, track-laying and wheeled (722)	251.1
Wood, sawn or chipped lengthwise, sliced or peeled (248.20,40)	484.4
Woven cotton fabrics (excl. narrow or special fabrics) (652)	355.2
Woven fabrics of man-made textile material (excl. narrow or special fabrics) (653)	319.6
Total major commodities(a)	*30,996.8*
Total Imports*(b)*	**47,064.2**

(a) Excludes commodities subject to a No Commodity Details restriction. *See* Appendix E of the 1988–89 issue of the 5410.0 publication for details. *(b)* Total imports includes imports of gold coins, whether or not they are legal tender, and other coins which are legal tender. *See* Appendix A of the 1988–89 issue of the 5410.0 publication for details.

EXPORTS BY INDUSTRY OF ORIGIN(a)
($ million)

ASIC Division/sub-division	*1986–87*	*1987–88(b)*	*1988–1989(b)*
Agriculture, forestry, fishing and hunting			
01 Agriculture*(c)*	6,141.4	7,196.6	7,942.1
03 Forestry and logging	3.8	4.3	5.4
04 Fishing and hunting	22.0	66.0	118.7
Total(c)	*6,167.1*	*7,266.8*	*8,006.1*
Mining			
11 Metallic minerals	2,904.5	3,468.3	4,243.9
12 Coal	5,430.9	4,774.4	4,647.4
13 Oil and gas	1,017.6	1,195.3	724.8
14 Construction materials	2.0	2.0	4.3
15 Other non-metallic minerals	119.8	141.4	129.5
Total	*9,474.8*	*9,581.4*	*9,749.9*
Manufacturing			
21 Food, beverages and tobacco	5,678.1	6,429.3	6,089.3
23 Textiles	1,303.1	1,561.2	1,344.4
24 Clothing and footwear	52.1	75.3	85.6
25 Wood, wood products and furniture	407.2	456.9	475.3
26 Paper, paper products, printing and publishing	199.9	213.8	260.1
27 Chemical, petroleum and coal products	1,421.5	1,837.8	1,967.9
28 Non-metallic mineral products	76.9	104.8	130.4
29 Basic metal products	6,045.3	7,842.4	9,109.1
31 Fabricated metal products	235.1	377.7	535.1
32 Transport equipment	1,238.6	1,168.3	1,041.1
33 Other machinery and equipment	1,901.7	2,203.7	2,218.0
34 Miscellaneous manufacturing	402.3	558.8	599.0
Total	*18,961.8*	*22,829.8*	*23,855.2*
Other industries			
Wholesale, retail and service industries	36.4	38.3	60.7
Confidential items; Waste and scrap nes; Second hand goods nes; Special goods	1,166.3	1,361.5	1,703.3
Total	*1,202.6*	*1,399.8*	*1,791.0*
Total Exports*(d)*	**35,806.4**	**41,077.8**	**43,462.2**

(a) Data through 1987–88 are compiled by allocating statistical items of the AECC to the appropriate ASIC industry code. For 1988–89 the data are compiled by allocating statistical items of the AHECC to the appropriate ASIC industry code. This change in the primary classification (commodity) may result in some minor breaks in series classified by ASIC between 1987–88 and 1988–89. *(b)* Includes exports of gold coins, whether or not they are legal tender, and other coins which are legal tender. *See* Appendix A of the 1988–89 issue of the 5410.0 publication for details. *(c)* From May 1987 includes exports of rice. Prior to that period rice was included with other confidential items. *(d)* Total exports excludes non-merchandise trade.

IMPORTS BY INDUSTRY OF ORIGIN(a)
($ million)

ASIC Division/sub-division	*1986–87*	*1987–88(b)*	*1988–1989(b)*
Agriculture, forestry, fishing and hunting			
01 Agriculture	571.2	609.8	645.6
03 Forestry and logging	3.5	3.5	3.0
04 Fishing and hunting	5.6	11.4	19.8
Total	*580.4*	*624.7*	*668.4*
Mining			
11 Metallic minerals	24.2	37.2	47.3
12 Coal	.3	.7	8.1
13 Oil and gas	569.8	1,045.5	998.3
14 Construction materials	15.8	17.5	21.6
15 Other non-metallic minerals	204.9	228.2	260.8
Total	*815.1*	*1,329.1*	*1,336.0*
Manufacturing			
21 Food, beverages and tobacco	1,606.8	1,676.2	1,870.3
23 Textiles	1,877.4	2,117.8	2,301.1
24 Clothing and footwear	954.9	1,003.9	1,046.9
25 Wood, wood products and furniture	707.2	815.1	1,022.4
26 Paper, paper products, printing and publishing	1,746.5	2,015.5	2,179.2
27 Chemical, petroleum and coal products	4,275.1	4,857.8	5,612.3
28 Non-metallic mineral products	641.1	762.7	875.4
29 Basic metal products	1,046.0	1,238.0	1,684.0
31 Fabricated metal products	960.3	1,119.9	1,326.4
32 Transport equipment	4,689.1	4,754.3	7,204.5
33 Other machinery and equipment	12,744.7	13,633.0	15,569.1
34 Miscellaneous manufacturing	2,408.2	2,709.0	3,038.8
Total	*33,657.4*	*36,703.3*	*43,730.4*
Other industries			
Wholesale, retail and service industries	168.7	218.1	367.8
Confidential items; Waste and scrap nes; Second hand goods nes; Special goods	1,766.5	1,721.4	961.6
Total	*1,935.3*	*1,939.5*	*1,329.4*
Total Imports*(c)*	**36,988.1**	**40,596.6**	**47,064.2**

(a) Data through 1987–88 are compiled by allocating statistical items of the AICC to the appropriate ASIC industry code. For 1988–89 the data are compiled by allocating statistical items of the Australian Customs Tariff to the appropriate ASIC industry code. This change in the primary classification (commodity) may result in some minor breaks in series classified by ASIC between 1987–88 and 1988–89. *(b)* Includes imports of gold coins, whether or not they are legal tender, and other coins which are legal tender. *See* Appendix A of the 1988–89 issue of the 5410.0 publication for details. *(c)* Total imports excludes non-merchandise trade.

EXPORTS BY BROAD ECONOMIC CATEGORIES (BEC)(a)
($ million)

BEC	*1986–87*	*1987–88(b)*	*1988–89(b)*
Food and beverages *(c)*	7,725.9	7,996.7	8,335.9
Primary *(c)*	3,553.5	3,276.6	3,593.2
Mainly for industry	2,604.9	2,218.2	2,737.6
Mainly for household consumption *(c)*	948.6	1,058.4	855.6
Processed	4,172.4	4,720.1	4,742.7
Mainly for industry	966.6	977.1	1,240.5
Mainly for household consumption	3,205.8	3,743.0	3,502.2
Industrial supplies not elsewhere specified	15,944.1	20,852.2	23,577.9
Primary	8,233.8	10,644.7	11,399.7
Processed	7,710.3	10,207.5	12,178.2
Fuels and lubricants	7,293.9	7,017.6	6,350.3
Primary	6,214.3	5,720.1	5,209.6
Processed	1,079.6	1,297.6	1,140.7
Motor spirit	77.0	98.2	55.9
Other	1,002.6	1,199.4	1,084.8
Capital goods (except transport equipment), and parts and accessories thereof	1,696.5	1,791.8	1,770.3
Capital goods (except transport equipment)	1,071.3	1,039.2	936.6
Parts and accessories	625.2	752.6	833.8
Transport equipment and parts and accessories thereof	1,312.7	1,272.2	1,154.3
Passenger motor cars*(d)*	100.8	143.0	169.3
Other	467.0	244.3	264.3
Industrial	414.4	182.8	176.4
Non-industrial	52.6	61.5	87.8
Parts and accessories*(d)*	744.9	884.9	720.8
Consumer goods not elsewhere specified	836.4	959.5	989.0
Durable	256.8	248.8	276.8
Semi-durable	214.2	299.5	285.2
Non-durable	365.3	411.2	426.9
Goods not elsewhere specified*(e)*	997.0	1,187.7	1,284.5
Total Exports	**35,806.4**	**41,077.8**	**43,462.2**

(a) Data through 1987–88 are compiled by allocating statistical items of the AECC to the appropriate BEC code. For 1988–89 the data are compiled by allocating statistical items of the AHECC to the appropriate BEC code. This change in the primary classification (commodity) may result in some minor breaks in series classified by BEC between 1987–88 and 1988–89. *(b)* Includes exports of gold coins, whether or not they are legal tender, and other coins which are legal tender. See Appendix A of the 1988–89 issue of the 5410.0 publication for details. *(c)* From May 1987 includes exports of rice. Prior to that period rice was included with other confidential items. *(d)* For periods prior to 1 January 1988 unassembled road motor vehicles are included with parts and accessories of transport equipment. From January 1 1988 they are included with passenger motor cars. *(e)* Includes commodities subject to a confidentiality restriction. *See* Appendixes D and E of the 1988–89 issue of the 5410.0 publication for details.

IMPORTS BY BROAD ECONOMIC CATEGORIES (BEC)(a)
($ million)

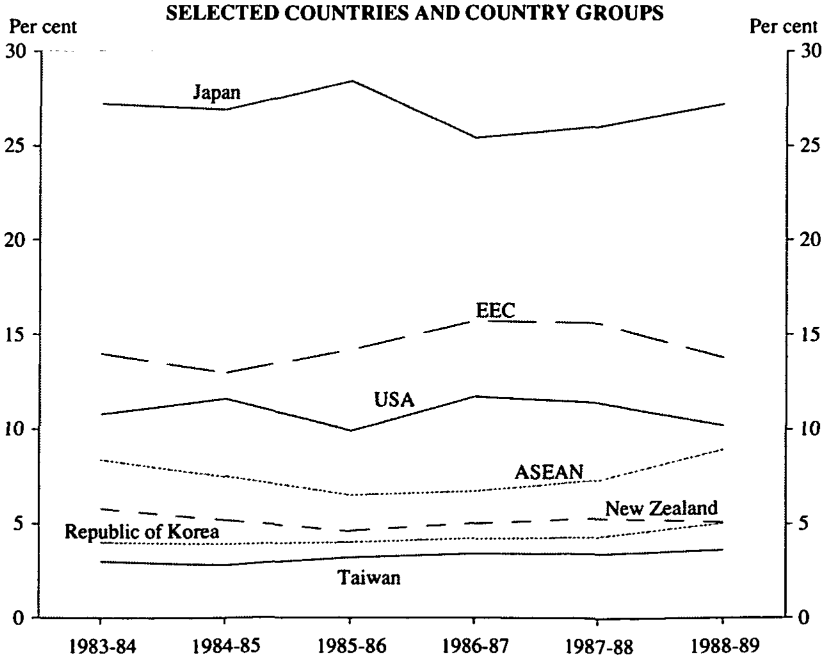
BEC I	*1986–87*	*1987–88(b)*	*1988–89(b)*
Food and beverages	1,749.2	1,911.3	2,181.2
Primary	477.6	548.3	650.1
Mainly for industry	163.9	247.7	317.1
Mainly for household consumption	313.6	300.6	332.9
Processed	1,271.6	1,363.0	1,531.2
Mainly for industry	195.0	204.6	189.5
Mainly for household consumption	1,076.6	1,158.4	1,341.7
Industrial supplies not elsewhere specified	10,061.7	11,836.9	13,605.8
Primary	585.9	659.9	709.2
Processed	9,475.8	11,177.0	12,896.6
Fuels and lubricants	1,637.1	1,940.1	1,906.4
Primary	566.0	1,043.2	1,005.8
Processed	1,071.1	896.8	900.5
Motor spirit	255.5	165.0	230.1
Other	815.5	731.9	670.5
Capital goods (except transport equipment), and parts and accessories thereof	10,594.8	11,370.3	13,004.9
Capital goods (except transport equipment)	7,270.7	7,728.3	8,890.9
Parts and accessories	3,324.2	3,642.1	4,114.0
Transport equipment and parts and accessories thereof	5,160.2	5,369.6	8,051.7
Passenger motor cars*(c)*	674.8	1,151.1	2,231.1
Other	1,814.6	1,495.7	3,056.0
Industrial	1,561.1	1,193.9	2,765.1
Non-industrial	253.5	301.8	290.9
Parts and accessories*(c)*	2,670.7	2,722.8	2,764.5
Consumer goods not elsewhere specified	6,013.5	6,459.1	7,233.1
Durable	1,990.3	2,132.4	2,503.7
Semi-durable	2,432.4	2,575.3	2,787.6
Non-durable	1,590.7	1,751.4	1,941.9
Goods not elsewhere specified*(d)*	1,771.6	1,709.3	1,081.1
Total Imports	**36,988.1**	**40,596.6**	**47,064.2**

(a) Data through 1987–88 are compiled by allocating statistical items of the AICC to the appropriate BEC code. For 1988–89 the data are compiled by allocating statistical items of the Australian Customs Tariff to the appropriate BEC code. This change in the primary classification (commodity) may result in some minor breaks in series classified by BEC between 1987–88 and 1988–89. *(b)* Includes imports of gold coins, whether or not they are legal tender, and other coins which are legal tender. See Appendix A of the 1988–89 issue of the 5410.0 publication for details. *(c)* For periods prior to 1 January 1988 unassembled road motor vehicles are included with parts and accessories of transport equipment. From January 1 1988 they are included with passenger motor cars. *(d)* Includes commodities subject to a confidentiality restriction. *See* Appendixes D and E of the 1988–89 issue of the 5410.0 publication for details.

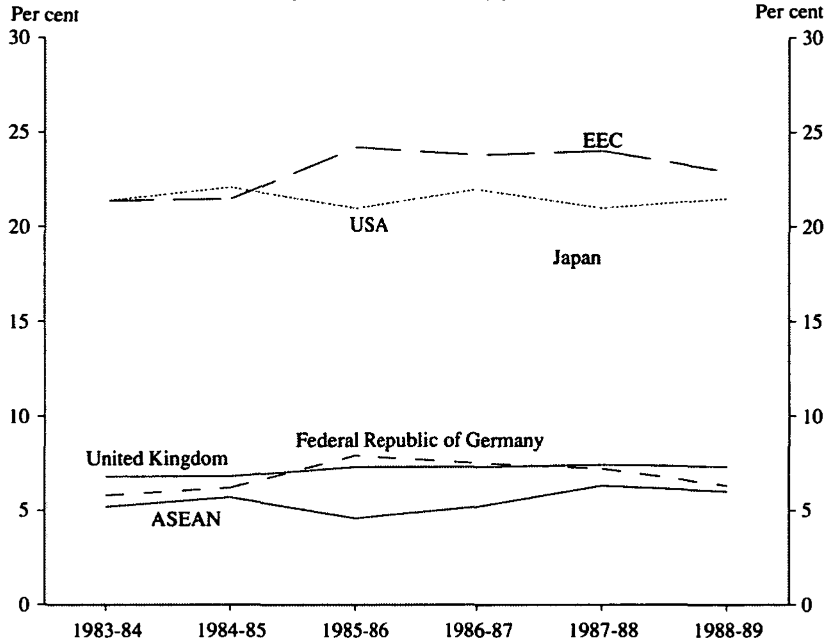
The following diagrams show the value of Australia's foreign trade for 1978–79 to 1988–89 and the percentage of Australian exports and imports by selected countries and country groups from 1983–84 to 1988–89.

EXPORTS AND IMPORTS, AUSTRALIA

PERCENTAGE OF AUSTRALIAN EXPORTS GOING TO SELECTED COUNTRIES AND COUNTRY GROUPS



PERCENTAGE OF AUSTRALIAN IMPORTS COMING FROM SELECTED COUNTRIES AND COUNTRY GROUPS



Direction of foreign trade

Exports and imports, by country of consignment or of origin

The following table shows the value of Australian exports and imports according to principal country of consignment or origin. The proportions of Australian exports and imports by country of consignment or origin are shown on the preceding page.

AUSTRALIAN EXPORTS AND IMPORTS, VALUE BY COUNTRY OR COUNTRY GROUP OF CONSIGNMENT OR ORIGIN(a)
($ million)

	Exports			*Imports*		
Country	*1986–87*	*1987–88*	*1988–89*	*1986–87*	*1987–88*	*1988–89*
Association of South East Asian Nations (ASEAN)—						
Brunei	*13.0*	*14.6*	*11.2*	32.4	28.2	31.7
Indonesia	528.3	595.3	748.3	310.6	587.7	418.9
Malaysia	591.6	655.9	742.4	409.7	590.7	687.1
Philippines	259.0	257.5	410.7	113.4	127.0	165.4
Singapore	779.4	1,166.1	1,481.0	755.8	899.0	1,090.0
Thailand	223.8	316.8	474.8	284.4	331.1	420.0
Total ASEAN	*2,395.1*	*3,006.3*	*3,868.4*	*1,906.2*	*2,563.7*	*2,813.2*
European Economic Community (EEC)—						
Belgium—Luxembourg	297.7	368.3	366.7	312.0	319.9	403.2
Denmark	161.9	89.5	70.0	176.9	189.7	202.4
France	908.2	982.8	975.1	828.8	892.1	1,275.7
Germany, Federal Republic of	1,100.7	1,066.7	1,071.5	2,780.9	2,918.1	2,950.8
Greece	34.8	73.9	64.4	45.3	50.3	76.6
Ireland	6.0	7.2	7.9	184.2	201.6	171.5
Italy	823.2	1,093.0	1,017.5	1,110.3	1,329.8	1,375.1

For footnotes *see* end of table.

AUSTRALIAN EXPORTS AND IMPORTS, VALUE BY COUNTRY OR COUNTRY GROUP OF CONSIGNMENT OR ORIGIN(a)—*continued*
($ million)

	Exports			*Imports*		
Country	*1986–87*	*1987–88*	*1988–89*	*1986–87*	*1987–88*	*1988–89*
Netherlands	598.4	626.7	660.6	486.6	595.9	601.0
Portugal	34.8	46.2	51.3	32.5	47.0	57.6
Spain	292.9	281.8	195.1	140.9	190.3	208.3
United Kingdom	1,374.5	1,771.6	1,522.5	2,705.7	3,012.2	3,453.8
Total EEC	*5,633.2*	*6,407.7*	*6,002.6*	*8,804.1*	*9,746.7*	*10,775.9*
Argentina	77.1	74.9	95.9	48.7	64.3	103.7
Austria	12.1	18.3	10.3	141.5	156.9	177.7
Bahrain	78.2	60.3	122.6	19.5	30.8	26.8
Bangladesh	41.5	50.3	70.2	17.7	22.9	22.7
Brazil	139.0	99.6	117.6	219.5	298.5	430.4
Canada	649.7	701.8	709.1	750.5	863.3	1,066.7
China	1,592.3	1,277.6	1,209.4	588.8	850.7	1,026.7
Czechoslovakia	34.4	68.3	74.9	28.9	41.1	52.2
Egypt*(b)*	362.5	316.7	423.2	0.2	2.2	2.8
Fiji	174.2	123.9	155.4	27.8	43.8	98.7
Finland	49.7	79.2	97.6	262.6	293.5	352.2
French Polynesia	69.2	72.9	67.9	0.3	0.4	0.4
Hong Kong	1,086.6	1,977.1	1,888.5	800.1	845.3	891.5
India	425.3	505.2	555.2	203.3	228.2	246.7
Iran	343.8	375.7	305.0	4.4	17.1	9.8
Iraq	194.8	178.4	311.0	0.3	0.2	0.2
Israel	70.3	61.2	61.9	86.5	123.4	138.3
Japan	9,083.3	10,684.1	11,840.5	7,709.7	7,816.5	9,766.5
Korea, Republic of	1,503.8	1,782.4	2,182.7	891.3	1,020.3	1,262.0
Kuwait	98.0	81.1	77.7	162.6	121.0	89.7
Mexico	41.6	54.4	53.3	55.3	64.9	80.5
Nauru	14.2	14.3	17.1	59.2	66.7	84.7
New Caledonia	55.1	85.1	76.5	1.9	3.9	1.7
New Zealand	1,777.0	2,181.5	2,219.2	1,431.2	1,732.5	1,970.5
Norway*(b)*	24.0	29.5	18.1	97.1	168.1	176.8
Oman	43.7	58.8	57.5	17.6	9.7	14.6
Pakistan	100.6	101.4	144.0	61.0	64.6	79.1
Papua New Guinea	651.1	741.3	785.2	189.7	109.1	104.7
Poland	107.4	199.5	182.7	21.2	27.4	30.7
Puerto Rico	0.9	1.4	6.0	69.4	98.6	114.1
Qatar	24.7	30.8	21.3	70.4	88.0	47.8
Romania	114.8	123.4	100.3	13.0	23.2	52.5
Saudi Arabia	298.0	268.1	249.6	437.3	418.9	458.3
South Africa	154.1	151.4	152.0	154.7	99.1	97.9
Sweden	120.8	120.6	142.7	655.4	776.6	840.4
Switzerland	365.1	307.7	348.7	489.9	543.8	496.3
Taiwan	1,228.9	1,386.5	1,566.5	1,517.4	1,743.9	1,919.9
Turkey	116.7	191.1	79.9	19.9	32.7	32.2
United Arab Emirates	222.1	236.3	253.7	175.8	215.8	396.3
United States of America	4,190.4	4,672.0	4,422.4	8,118.5	8,532.0	10,129.4
USSR	687.7	630.3	1,012.9	15.1	21.7	53.8
Yemen Arab Republic	65.1	61.3	29.3	—	—	—
Yemen, People's Democratic Republic of	30.4	45.6	39.5	—	—	8.7
Yugoslavia	110.2	91.2	130.2	38.1	49.7	56.8
Zimbabwe	4.8	7.6	6.8	294.1	179.7	8.6
Destination or Origin Unknown	—	0.5	1.2	11.4	9.0	18.8
Ships' Stores	407.6	465.4	426.3	—	—	—
No Country Details*(c)*	121.2	148.9	132.6	—	—	—
Other countries	626.7	668.9	538.1	800.0	468.8	355.4
Re-imports	—	—	—	27.1	30.7	78.8
Total	**35,806.4**	**41,077.8**	**43,462.2**	**36,988.1**	**40,596.6**	**47,064.2**

(a) Includes, from 1 July 1987, exports or imports of gold coins, whether or not they are legal tender, and other coins which are legal tender. For periods prior to 1 July 1987 the trade in these commodities is recorded as non-merchandise. *(b)* Excludes exports of alumina, details of which are included in the 'No Country Details' category at the end of this table. *(c)* Includes exports of alumina to Egypt, Iceland and Norway.

Foreign trade by State

The following table shows the value of exports and imports for each State and Territory.

EXPORTS AND IMPORTS BY STATE
($ million)

	Exports			Imports		
State(a)	*1986–87*	*1987–88(b)*	*1988–89(b)*	*1986–87*	*1987–88(b)*	*1988–89(b)*
New South Wales	8,364.2	10,597.8	10,903.7	16,055.9	18,089.6	20,875.1
Victoria	7,389.6	9,044.6	8,526.2	13,741.6	14,020.0	15,958.1
Queensland	7,761.9	8,072.4	8,976.3	2,503.5	2,845.2	3,788.4
South Australia	2,044.2	2,271.6	2,446.8	1,503.4	1,804.8	1,861.4
Western Australia	6,673.7	7,434.9	8,856.6	2,586.8	3,152.5	3,581.8
Tasmania	1,088.9	1,223.5	1,356.6	289.4	282.4	348.6
Northern Territory	750.6	905.4	938.8	265.8	385.2	625.9
Australian Capital Territory	0.9	2.4	3.5	41.7	16.8	24.8
State not available	121.2	148.9	132.6	n.a.	n.a.	n.a.
Re-exports	1,611.2	1,376.5	1,321.1	n.a.	n.a.	n.a.
Total(c)	**35,806.4**	**41,077.8**	**43,462.2**	**36,988.1**	**40,596.6**	**47,064.2**

(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. *(b)* Includes, from 1 July 1987, exports or imports of gold coins, whether or not they are legal tender, and other coins which are legal tender. *See* Appendix A of the 1988–89 issue of the 5410.0 publication for further detail. *(c)* Total excludes non-merchandise trade.

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 DUTIES(a)

		1986–87	*1987–88*	*1988–89*
Total import clearances	$m	38,025.1	41,782.5	47,893.5
Total dutiable clearances	$m	23,732.4	26,178.7	16,524.8
Total customs duties collected	$m	3,292.3	3,710.3	3,879.4
Ratio of dutiable clearances to total clearance	per cent	62.4	62.7	34.5
Ratio of duties collected to dutiable clearances	per cent	13.9	14.2	23.4

(a) Includes, from 1 July 1987, import clearances of gold coins, whether or not they are legal tender, and other coins which are legal tender. For periods prior to 1 July 1987 the trade in these commodities is recorded as non-merchandise.

FOREIGN INVESTMENT

Foreign investment statistics provide information on the *level* (stock) of Australia's foreign financial assets and liabilities at a given point in time, *capital transactions* (investment flows) which increase and decrease these assets and liabilities, *other changes* in the value of these assets and liabilities, and *income* receivable and payable on these assets and liabilities.

These statistics form an integral part of Australia's balance of payments as well as being useful in their own right in determining, for example, the impact of foreign investment policies and the level of Australia's foreign assets and liabilities, including foreign debt. They are also useful when analysing the behaviour of financial markets. The statistics are collected from surveys of foreign investment which have been conducted since 1947–48.

Classification

The primary classification used in foreign investment statistics is the direction of investment. This classification refers to the basic distinction between inward and outward investment, that is, foreign investment in Australia or Australian investment abroad. Broadly, *foreign investment in Australia* refers to the stock of financial assets in Australia owned by foreign residents and capital transactions which increase or decrease this stock. Conversely, *Australian investment abroad* refers to the stock of financial assets abroad owned by Australian residents and capital transactions which increase or decrease this stock.

Foreign investment is undertaken by means of instruments of investment. Many types of instrument of investment can be identified, but for analytical reasons and ease of reporting similar instruments are combined.

- Equity includes ordinary and preference shares, units in trusts and net equity in branches.
- Borrowing (foreign investment in Australia) or lending (Australian investment abroad) comprises deposits, loans, finance leases, bonds, bills, IMF credit and Bank of International Settlements placements.
- Reserve Assets includes monetary gold, Special Drawing Rights and reserve position in the IMF and foreign exchange held by the Reserve Bank of Australia.
- Other investments consists of amounts outstanding in respect of goods, services, interest, dividends etc.
- Reinvestment of earnings of direct investors refers to income retained from after tax profits attributable to direct investors.

Statistics are provided in respect of both Australia's gross foreign debt (borrowing) and Australia's net foreign debt, the latter being derived by deducting reserve assets and lending abroad from gross foreign debt.

The country dissection of statistics on foreign investment shows the countries investing in Australia or receiving investment from Australia. The classification is based upon the country of residence of the foreign creditor or debtor holding Australia's financial liabilities or financial assets. It does not necessarily reflect either the country of ultimate beneficial ownership of the investment, the country of immediate source of funds or the country to which amounts borrowed will in fact be repaid.

The industry classification used in foreign investment statistics is based upon the Australian Standard Industrial Classification (ASIC), 1983 edition. For both foreign investment in Australia and Australian investment abroad, investment is classified by the industry of the enterprise group receiving that investment. Industry statistics should be treated with some caution as they do not necessarily reflect the industry in which the funds are ultimately employed.

Coverage

As there is no comprehensive source for identifying enterprises engaged in foreign investment activity, lists of enterprises included in foreign investment surveys are compiled from a variety of sources. These sources include stock exchange reports, company reports, newspapers and the financial press, business directories, tax declaration forms submitted under the Banking (Foreign Exchange) Regulations, information provided on a confidential basis of proposals approved by the Foreign Investment Review Board and records of the Commissioner of Corporate Affairs in some States.

Valuation and timing

Market price is the principle method of valuation in foreign investment statistics. Capital transactions are recorded on a change of ownership basis, that is, at the time when the foreign financial assets or liability is acquired, sold, repaid or otherwise disposed of. By convention, this is taken to be the time at which the event is recorded in the books of the transactors. Investment income is generally recorded at the time it becomes due for payment.

Foreign investment statistics

The table below shows a reconciliation between opening and closing levels for foreign investment in Australia, Australian investment abroad and Australia's net international investment position. The table also shows income payable on foreign investment in Australia, income receivable on Australian investment abroad and net income payable.

FOREIGN INVESTMENT SUMMARY TABLE
($A million)

		Changes in levels of investment during the year						
Year	*Levels of investment at beginning of year*	*Reinvestment of earnings of direct investors*	*Other transactions*	*Exchange rate variations*	*Other changes*	*Total*	*Levels of investment at end of year*	*Investment income (a)*
FOREIGN INVESTMENT IN AUSTRALIA								
Equity—								
1986–87	40,503	1,244	6,376	–100	16,145	23,664	64,167	2,694
1987–88	64,167	2,416	4,626	71	–3,494	3,620	67,787	4,183
1988–89	67,787	2,225	7,289	–34	5,310	14,789	82,576	5,271
Borrowing—								
1986–87	92,050	..	14,585	–1,672	740	13,652	105,702	7,784
1987–88	105,702	..	17,985	–4,798	1,608	14,795	120,497	8,578
1988–89	120,497	..	16,802	1,123	1,061	18,986	139,483	10,484
Other Investment(*b*)—								
1986–87	6,884	..	–109	126	537	555	7,439	20
1987–88	7,439	..	22	–166	70	–75	7,364	34
1988–89	7,364	..	200	32	–339	–109	7,255	196
Total(b)—								
1986–87	139,437	1,244	20,852	–1,646	17,420	37,871	177,308	10,501
1987–88	177,308	2,416	22,633	–4,893	–1,816	18,340	195,648	12,797
1988–89	195,648	2,225	24,290	1,121	6,030	33,666	229,314	15,950
AUSTRALIAN INVESTMENT ABROAD								
Equity—								
1986–87	20,253	1,178	7,017	–259	4,311	12,247	32,500	1,816
1987–88	32,500	2,163	7,328	–196	–3,432	5,863	38,363	2,472
1988–89	38,363	2,123	6,438	–469	296	8,388	46,751	2,468
Reserve Assets—								
1986–87	13,024	..	3,394	239	937	4,570	17,594	531
1987–88	17,594	..	3,924	–893	–444	2,588	20,182	706
1988–89	20,182	..	873	3	–648	228	20,410	998
Lending—								
1986–87	3,981	..	274	–219	1094	1149	5,130	99
1987–88	5,130	..	2,835	–28	–408	2,399	7,529	269
1988–89	7,529	..	1,644	–143	131	1,632	9,161	318
Other Investment(*b*)—								
1986–87	6,024	..	801	52	–25	828	6,852	175
1987–88	6,852	..	–26	–38	(*c*)–338	–402	6,450	117
1988–89	6,450	..	981	40	259	1,280	7,730	94
Total(b)—								
1986–87	43,283	1,178	11,485	–187	6,317	18,793	62,076	2,621
1987–88	62,076	2,163	14,061	–1,154	–4,622	10,448	72,524	3,563
1988–89	72,524	2,123	9,934	–568	39	11,528	84,052	3,875

For footnotes *see* end of table.

FOREIGN INVESTMENT SUMMARY TABLE—*continued*
($A million)

Year	*Levels of investment at beginning of year*	*Changes in levels of investment during the year:* *Reinvestment of earnings of direct investors*	*Other transactions*	*Exchange rate variations*	*Other changes*	*Total*	*Levels of investment at end of year*	*Investment income (a)*
NET INTERNATIONAL INVESTMENT POSITION AND INCOME*(d)*								
Net equities—								
1986–87	20,249	66	–641	159	11,834	11,417	31,667	878
1987–88	31,667	254	–2,702	267	–62	–2,243	29,424	1,711
1988–89	29,424	102	851	435	5,014	6,401	35,825	2,803
Net Foreign Debt*(e)*—								
1986–87	75,045	..	10,918	–1,692	–1,291	7,933	82,979	7,154
1987–88	82,979	..	11,226	–3,877	2,460	9,808	92,786	7,603
1988–89	92,786	..	14,285	1,263	1,578	17,126	109,913	9,168
Net Other Investment—								
1986–87	859	..	–910	73	562	–273	587	–155
1987–88	587	..	48	–128	408	327	914	–83
1988–89	914	..	–781	–8	–598	–1389	–475	102
Net International Investment Position—								
1986–87	96,154	66	9,368	–1,459	11,103	19,078	115,232	7,880
1987–88	115,323	254	8,572	–3,739	2,806	7,892	123,124	9,234
1988–89	123,124	102	14,357	1,689	5,991	22,138	145,262	12,075

(a) Includes reinvested earnings of direct investors. *(b)* Details of exchange rate variations for accounts payable/prepayments received (foreign investment in Australia) and accounts receivable/prepayments made (Australian investment abroad), components of 'other investment', are not available and have been included in 'other changes'. *(c)* As a result of a change in source for accounts payable/prepayments received (foreign investment in Australia) and accounts receivable/prepayments made (Australian investment abroad), components of 'other investment', levels at 30 June 1988 are not strictly comparable with levels of data shown for earlier periods. The changed data source accounts for decreases of $409 million and $656 million in the 1987–88 'other changes' for foreign investment in Australia and Australian Investment abroad respectively. *(d)* Net international investment position equals foreign investment in Australia less Australian investment abroad. *(e)* Foreign borrowing by Australian residents less the sum of reserve assets and Australian lending abroad.

The following table provides details on Australia's foreign debt, including foreign borrowing, reserve assets and lending abroad and net foreign debt.

LEVELS OF FOREIGN DEBT
($A million)

	At 30 June— *1984*	*1985*	*1986*	*1987*	*1988*	*1989*
FOREIGN BORROWING (GROSS DEBT)						
Official—						
Commonwealth Government and Reserve Bank	8,534	12,982	19,553	23,173	22,286	17,982
State government	339	1,901	3,855	6,684	10,475	16,260
Total official	*8,874*	*14,883*	*23,409*	*29,857*	*32,761*	*34,242*
Non-official—						
Financial enterprises—						
Public sector	1,197	2,530	5,505	6,557	10,453	16,095
Private sector	5,073	9,034	14,972	20,074	23,794	29,980
Total	*6,270*	*11,564*	*20,477*	*26,631*	*34,246*	*46,075*
Trading enterprises—						
Public sector	7,711	12,452	13,504	12,327	12,511	11,555
Private sector	21,247	28,574	34,661	36,888	40,979	47,611
Total	*28,957*	*41,026*	*48,165*	*49,215*	*53,490*	*59,167*
Total non-official	*35,227*	*52,590*	*68,641*	*75,845*	*87,737*	*105,242*
Total	**44,101**	**67,473**	**92,050**	**105,702**	**120,497**	**139,483**

LEVELS OF FOREIGN DEBT—*continued*
($A million)

	At 30 June—					
	1984	*1985*	*1986*	*1987*	*1988*	*1989*
AUSTRALIAN LENDING ABROAD AND RESERVE ASSETS						
Official—						
Reserve assets*(a)*	12,417	13,517	13,024	17,594	20,182	20,410
Lending	3	106	137	364	649	914
Total official	*12,420*	*13,623*	*13,161*	*17,958*	*20,831*	*21,324*
Non-official—						
Financial enterprises	576	1,190	2,838	3,349	4,848	6,897
Trading enterprises	1,212	1,451	1,006	1,417	2,031	1,350
Total non-official	*1,788*	*2,642*	*3,845*	*4,766*	*6,880*	*8,247*
Total	**14,208**	**16,265**	**17,005**	**22,724**	**27,711**	**29,571**
NET FOREIGN DEBT*(b)*						
Official—	*-3,546*	*1,260*	*10,248*	*11,899*	*11,929*	*12,918*
Non-official—						
Financial enterprises	5,694	10,374	17,639	23,281	29,398	39,178
Trading enterprises	27,746	39,575	47,158	47,798	51,459	57,817
Total non-official	*33,440*	*49,948*	*64,797*	*71,079*	*80,857*	*96,995*
Total	**29,893**	**51,208**	**75,045**	**82,979**	**92,786**	**109,913**

(a) From 30 June 1985, figures for official reserve assets are not fully comparable with earlier data due to changes in the Reserve Bank's accounting procedures. *(b)* Foreign borrowing by Australian residents less the sum of Australian lending abroad and reserve assets.

The following tables provide details of foreign investment in Australia and Australian investment abroad classified by country and foreign investment in Australia classified by industry of investment. This information is provided in respect of capital transactions, investment income and levels.

FOREIGN INVESTMENT IN AUSTRALIA, BY COUNTRY
($A million)

	Year—					
Country of investor	*1983–84*	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
CAPITAL TRANSACTIONS						
OECD—						
USA	1,411	3,564	4,304	4,604	728	5,887
Japan	1,500	3,454	2,673	814	5,430	4,710
Switzerland	134	399	544	334	651	290
EEC—						
UK	2,529	2,287	1,932	3,562	6,330	1665
Other*(a)*	656	1,290	3,051	1,768	866	2335
Total	*3,185*	*3,577*	*4,983*	*5,330*	*7,196*	*4,000*
Other OECD*(a)*	242	402	871	1,821	1,471	554
Total OECD	*6,473*	*11,397*	*13,374*	*12,902*	*15,476*	*15,441*
ASEAN	2,148	592	–837	1,003	49	-1,243
Other countries	586	71	–760	1,169	1,636	2,387
International capital markets	953	2,321	6,806	6,791	5,295	7,530
International institutions	–137	–55	14	–24	–94	–259
Unallocated	145	462	548	256	2,687	2,659
Total	**10,167**	**14,788**	**19,144**	**22,097**	**25,049**	**26,515**

For footnotes *see* end of table.

FOREIGN INVESTMENT IN AUSTRALIA, BY COUNTRY—*continued*
($A million)

Country of investment	*1983–84*	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
			INVESTMENT INCOME			
OECD—						
USA	1,707	2,037	2,465	2,779	3,558	3,501
Japan	799	1,224	1,376	1,621	1,690	2,400
Switzerland	175	213	263	383	368	465
EEC—						
UK	1,504	1,833	1,975	2,182	2,244	3,348
Other(*a*)	452	524	721	1,014	1,249	1,392
Total	*1,956*	*2,357*	*2,696*	*3,195*	*3,493*	*4,741*
Other OECD(*a*)	192	212	327	321	370	361
Total OECD	*4,829*	*6,041*	*7,126*	*8,299*	*9,478*	*11,468*
ASEAN	470	739	694	613	480	656
Other countries	327	440	393	334	331	692
International capital markets	38	124	555	934	1,516	2,476
International institutions	40	32	24	22	22	18
Unallocated	130	187	242	299	968	640
Total	**5,833**	**7,563**	**9,032**	**10,501**	**12,797**	**15,950**
			LEVELS OF INVESTMENT AT END OF YEAR			
OECD—						
USA	20,320	26,819	31,903	41,400	40,248	46,808
Japan	10,802	16,200	20,840	21,370	26,813	33,265
Switzerland	3,114	4,050	5,856	7,502	7,416	7,041
EEC—						
UK	20,631	26,138	29,318	37,279	43,702	47,153
Other(*a*)	8,054	10,441	14,443	17,842	18,497	19,736
Total	*28,685*	*36,579*	*43,761*	*55,121*	*62,199*	*66,889*
Other OECD(*a*)	2,844	3,801	4,541	8,888	8,620	10,654
Total OECD	*65,764*	*87,449*	*106,901*	*134,280*	*145,296*	*164,657*
ASEAN	7,214	9,695	8,951	10,449	8,122	7,317
Other countries	5,062	6,840	5,803	6,862	8,294	11,509
International capital markets	1,425	4,466	13,306	20,951	25,834	34,436
International institutions	390	341	365	332	239	287
Unallocated	2,017	2,527	4,111	4,434	7,862	11,108
Total	**81,873**	**111,318**	**139,437**	**177,308**	**195,648**	**229,314**

(*a*) Until 1985–86, Spain and Portugal are included in 'Other OECD', from 1985–86 they are included in 'Other EEC'.

AUSTRALIAN INVESTMENT ABROAD, BY COUNTRY
($A million)

Country of investment	*1983–84*	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
			CAPITAL TRANSACTIONS			
OECD—						
USA	2,186	–307	1,294	7,575	2,332	3,969
New Zealand	163	231	2	1,550	1,452	998
UK	225	717	788	1,229	5,008	1,786
Other OECD (*a*)	968	1,521	1,000	1,400	2,630	4,620
Total OECD	*3,543*	*2,161*	*3,084*	*11,754*	*11,422*	*11,373*
ASEAN	285	319	111	103	10	797
Papua New Guinea	230	94	–107	13	405	178
Other countries	231	351	2,230	832	2,449	–392
Unallocated	157	231	–456	–39	1,937	101
Total	**4,446**	**3,156**	**4,862**	**12,663**	**16,224**	**12,057**

For footnotes *see* end of table.

AUSTRALIAN INVESTMENT ABROAD, BY COUNTRY—*continued*
($A million)

Country of investment	*1983–84*	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
	INVESTMENT INCOME					
OECD—						
USA	643	698	405	533	654	1,316
New Zealand	154	173	262	344	326	306
UK	122	96	277	330	672	759
Other OECD*(a)*	119	270	396	437	640	614
Total OECD	*1,037*	*1,237*	*1,340*	*1,644*	*2,293*	*2,995*
ASEAN	150	101	154	121	82	113
Papua New Guinea	108	53	141	61	3	81
Other countries	118	80	212	583	1,043	572
Unallocated	55	54	119	213	142	114
Total	**1,468**	**1,525**	**1,966**	**2,621**	**3,563**	**3,875**
	LEVELS OF INVESTMENT AT END OF YEAR					
OECD—						
USA	10,195	11,906	13,081	20,700	20,584	32,467
New Zealand	928	927	1,599	3,785	5,091	5,500
UK	1,465	2,511	3,652	7,619	12,893	13,836
Other OECD*(a)*	3,939	6,399	9,848	12,656	14,736	12,965
Total OECD	*16,528*	*21,744*	*28,180*	*44,760*	*53,305*	*64,769*
ASEAN	1,676	1,582	1,357	1,413	1,090	1,466
Papua New Guinea	1,016	994	856	1,437	1,725	1,499
Other countries	3,059	3,977	7,038	7,959	9,347	8,880
Reserve Bank gold*(b)*	3,478	3,772	4,014	4,951	4,509	3,861
Unallocated	949	1,691	1,838	1,555	2,549	3,578
Total	**26,706**	**33,760**	**43,283**	**62,076**	**72,524**	**84,052**

(a) The foreign exchange part *of* reserve assets, with the exception of those held in the USA, are not available by country and are therefore included in 'Other OECD'. *(b)* Gold held by the Reserve Bank as part of reserve assets which cannot be allocated by country.

FOREIGN INVESTMENT IN AUSTRALIA, BY INDUSTRY(a)
($A million)

	Industry of investment (ASIC division)	*1983–84*	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
		CAPITAL TRANSACTIONS					
A	Agriculture, forestry, fishing and hunting	5	3	41	438	–122	117
B	Mining	237	519	–1,020	1,143	1,530	1,874
C	Manufacturing	1,948	901	2,946	3,191	4,158	4,970
D	Electricity, gas and water	652	745	314	–995	–150	–1,800
E	Construction	57	62	–59	358	–55	–276
F	Wholesale and retail trade	1,510	1,898	1,009	1,316	1,696	1,449
G	Transport and storage	327	402	392	258	98	1,790
I	Finance property and business services*(b)*	3,596	6,973	11,130	12,506	17,518	21,150
J	Public administration, and defence*(c)*	971	2,629	3,961	3,244	–127	–4,749
H, K, L	Other industries*(d)*	310	294	235	202	444	864
M	Unallocated*(e)*	555	362	198	437	62	1,126
	Total all industries	**10,167**	**14,788**	**19,144**	**22,097**	**25,049**	**26,515**

For footnotes *see* end of table.

FOREIGN INVESTMENT IN AUSTRALIA, BY INDUSTRY(a)—*continued*
($A million)

		Year—					
	Industry of investment (ASIC division)	*1983–84*	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
	INVESTMENT INCOME						
A	Agriculture, forestry, fishing and hunting	3	2	24	5	10	53
B	Mining	974	1,083	1,827	1,237	1,296	1,316
C	Manufacturing	1,295	1,623	1,770	1,795	2,832	3,744
D	Electricity, gas and water	306	424	492	530	452	436
E	Construction	38	31	69	58	119	73
F	Wholesale and retail trade	626	688	468	940	1,137	1,904
G	Transport and storage	258	262	370	381	408	611
I	Finance property and business services*(b)*	1,329	1,882	1,816	2,679	3,733	4,582
J	Public administration, and defence*(c)*	668	927	1,345	1,912	2,196	2,353
H, K, L	Other industries*(d)*	39	74	76	50	104	57
M	Unallocated*(e)*	297	567	775	913	510	822
	Total all industries	**5,833**	**7,563**	**9,032**	**10,501**	**12,797**	**15,950**
	LEVELS OF INVESTMENT AT END OF YEAR						
A	Agriculture, forestry, fishing and hunting	528	591	558	950	714	1,303
B	Mining	15,264	19,462	17,949	28,542	25,333	25,611
C	Manufacturing	18,440	22,121	27,641	34,988	38,996	48,263
D	Electricity, gas and water	5,112	7,534	8,400	7,353	7,222	5,058
E	Construction	849	1,200	1,100	1,688	1,655	1,427
F	Wholesale and retail trade	11,258	14,378	15,104	16,714	19,465	22,980
G	Transport and storage	3,020	4,267	5,286	5,894	5,876	7,681
I	Finance, property and business services*(b)*	15,004	23,776	36,495	51,519	67,937	91,957
J	Public administration, and defence*(c)*	8,861	13,273	19,930	23,522	22,507	18,093
H, K, L	Other industries*(d)*	1,088	1,651	1,846	1,804	2,240	3,196
M	Unallocated*(e)*	2,449	3,065	5,126	4,334	3,703	3,745
	Total all industries	**81,873**	**111,318**	**139,437**	**177,308**	**195,648**	**229,314**

(a) The industry categories shown are based on the 1983 edition of ASIC and relate to the predominant activity of the enterprise group receiving the investment funds. This is not necessarily the industry of the end use of the funds. *(b)* Includes the Reserve Bank and the State Government component of General Government. *(c)* Includes the Commonwealth Government component of General Government. *(d)* Consists of: Division H—Communications, Division K—Community services, and Division L—Recreation, personal and other services. *(e)* Details of accounts payable/prepayments received are not classified by industry prior to 1988–89 and are therefore included in 'Unallocated'.

BALANCE OF PAYMENTS

The Australian balance of payments is a systematic record of Australia's economic transaction with the rest of the world. Balance of payments statistics are essential for 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. Except for the war years 1939 to 1945, estimates have since been published at least annually.

Detailed estimates are provided in the annual publication *Balance of Payments, Australia* (5303.0) with supplementary regional data available on request for a charge. More timely estimates are provided in the quarterly publication *Balance of Payments, Australia* (5302.0) approximately eight weeks after the end of each quarter, with corresponding historical data available on request for a charge. A monthly publication *Balance of Payments, Australia* (5301.0), showing preliminary estimates in less detail, is published about twenty working days after the end of each month. The publication *Balance of Payments, Australia: Concepts, Sources and Methods* (5331.0) provides a comprehensive description of the concepts and structure of the Australian balance of payments and of the data sources and methods used to compile the statistics contained in the above publications.

Balance of payments transactions can 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. The third category, described as unrequited transfers, provides 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.

Traditionally, 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.

The double entry system is used for recording balance of payments transactions. Under this system, credit entries which have no arithmetic sign, 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, identified by a minus sign (–), 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. For example, an export transaction for which payment is received through the banking system involves a credit entry for the export and a debit entry for the increase in foreign exchange assets. Any entries that are not automatically paired are matched by special offsetting entries. Such offsetting entries are required for the category of unrequited transfers and for the other changes not arising from transactions referred to in the previous paragraph, namely the allocation (or cancellation) of SDRs and the monetisation (or demonetisation) of gold.

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. The balancing item is shown separately outside both current and capital accounts since it reflects the net effects of errors and omissions in both accounts.

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 transaction prices because this basis provides the closest practical approximation to the market price principle.

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 transactions, this is conceived as the time when ownership of goods changes, when services are rendered, when reinvested earnings attributable to direct investors are 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.

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. 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 tables that follow, global estimates of the current and capital accounts of the Australian balance of payments are presented. Current transactions are recorded *gross* and capital transactions *net*. This means that for each item in the current account the credit entries are recorded separately from the debit entries. For example, *travel credits* is shown separately from *travel debits*. For each item in the capital account, debit and credit transactions are combined to produce a single result for the item which may be either a net credit or a net debit. For example, in a given period, foreign purchases of shares issued by companies in Australia (credit) are netted against foreign sales of similar shares (debit) and the net result is recorded in the appropriate item in the capital account.

The current account records transactions between Australian residents and non-residents in merchandise, other goods and services, income and unrequited transfers. Merchandise includes all movable goods, with a few exceptions, which change ownership from residents to non-residents (exports) and from non-residents to residents (imports). Services covers services rendered by Australian residents to non-residents (credits) and by non-residents to residents (debits), together with transactions in a few types of goods (e.g. goods purchased by travellers). Income covers income earned by Australian residents from non-residents (credits) or by non-residents from residents (debits). It includes investment income (e.g. dividends and interest), other property income (e.g. royalties) and labour income. Unrequited transfers covers the offsetting entries required when resources are provided without something of economic value being received in return, by non-residents to Australian residents (offsetting credits required) and by residents to non-residents (offsetting debits required). It includes foreign aid and migrants' transfers.

The capital account records transactions in Australia's foreign financial assets and liabilities, including the creation and extinction of claims on or by the rest of the world and a few specified other changes. Capital transactions are grouped into two broad institutional sectors called official and non-official. The official sector is split into general government and Reserve Bank of Australia. Public business enterprises are excluded from this sector and included in the non-official sector. The non-official sector covers transactions of all other resident entities including banks, non-bank financial enterprises and trading enterprises, and households.

CURRENT ACCOUNT
($ million)

	1986–87	*1987–88*	*1988–89*
Current transactions—			
Goods and services—			
Merchandise*(a)*—			
Exports f.o.b.	35,423	40,541	43,047
Imports f.o.b.	–37,159	–40,386	–47,032
Balance on merchandise trade	*–1,736*	*155*	*–3,985*
Services—			
Credits—			
Shipment	462	537	554
Other transportation	2,765	3,142	3,232
Travel	2,546	3,565	4,440
Other services	1,952	2,274	2,630
Total services credits	*7,725*	*9,518*	*10,856*
Debits—			
Shipment	–2,756	–2,856	–3,176
Other transportation	–2,114	–2,510	–2,917
Travel	–3,108	–3,712	–4,238
Other services	–2,880	–3,178	–3,342
Total services debits	*–10,858*	*–12,256*	*–13,673*
Net services	*–3,133*	*–2,738*	*–2,817*
Balance on goods and services	*–4,869*	*–2,583*	*–6,802*
Income—			
Credits—			
Property income—			
Reinvested earnings	1,178	2,162	2,123
Other	1,691	1,606	1,973
Labour and other income	165	176	190
Total income credits	*3,034*	*3,944*	*4,286*
Debits—			
Property income—			
Reinvested earnings	–1,244	–2,417	–2,225
Other	–10,161	–11,455	–14,745
Labour and other income	–179	–210	–219
Total income debits	*–11,584*	*–14,082*	*–17,189*
Net income	*–8,550*	*–10,138*	*–12,903*
Unrequited transfers—			
Credits	3,017	3,545	4,210
Debits	–1,804	–1,881	–2,001
Net unrequited transfers	*1,213*	*1,664*	*2,209*
Balance on current account	**–12,206**	**–11,057**	**–17,496**

(a) Balance of payments basis.

CAPITAL ACCOUNT AND BALANCING ITEM
($ million)

	1986–87	*1987–88*	*1988–89*
Net capital transactions			
Official—			
General government—			
Foreign investment in Australia—			
Borrowing	6,146	4,087	1,047
Other	–12	–71	–188
Total	*6,134*	*4,016*	*859*
Australian investment abroad	–573	415	–359
Total general government	*5,561*	*4,431*	*500*
Reserve Bank—			
Foreign investment in Australia	18	–8	—
Australian investment abroad—			
Reserve assets	–3,394	–3,924	–873
Other	—	—	—
Total	*–3,394*	*–3,924*	*–873*
Total Reserve Bank	*–3,376*	*–3,932*	*–873*
Total official	*2,185*	*499*	*–373*
Non official—			
Foreign investment in Australia—			
Direct investment—			
Reinvestment of earnings	1,244	2,417	2,225
Other	3,510	4,582	8,358
Portfolio and other investment	11,191	14,042	15,071
Total foreign investment in Australia	*15,945*	*21,041*	*25,654*
Australian investment abroad—			
Direct investment—			
Reinvestment of earnings	–1,178	–2,162	–2,123
Other	–3,353	–8,612	–4,428
Portfolio and other investment	–4,164	–1,942	–4,275
Total Australian investment abroad	*–8,695*	*–12,716*	*–10,826*
Total non-official	*7,250*	*8,325*	*14,828*
Balance on capital account	*9,435*	*8,824*	*14,455*
Balancing item	*2,771*	*2,233*	*3,041*

OFFICIAL RESERVE ASSETS AND AVERAGE EXCHANGE RATES

(*Source*: Reserve Bank of Australia for official reserve assets)

	Financial year ending 30 June—		
	1987	*1988*	*1989*
Levels of official reserve assets*(a)*		—$ million—	
Foreign exchange—			
United States dollars	6,571	8,015	6,813
Other	5,266	6,926	8,924
Special drawing rights	471	420	398
Reserve position in IMF	335	312	414
Gold	4,951	4,509	3,861
Total	**17,594**	**20,182**	**20,410**
Exchange rates		—Units of foreign currency per $A—	
End of year*(b)*—			
United States dollar	0.7203	0.7940	0.7553
United Kingdom pound	0.4494	0.4612	0.4882
West German mark	1.319	1.441	1.480
Japanese yen	105.79	105.17	108.79
Special drawing right	0.5634	0.6059	0.6051
Period average*(c)*—			
United States dollar	0.6636	0.7290	0.8160
United Kingdom pound	0.4352	0.4167	0.4755
West German mark	1.280	1.262	1.512
Japanese yen	101.37	97.58	106.95
Special drawing right	0.5345	0.5448	0.6244

(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 trading 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 end of period market rates of exchange. *(b)* These exchange rates relate to the last trading day of the reference period. *(c)* These exchange rates are derived by averaging figures for each trading day.

VALUES OF EXPORTS AND IMPORTS OF GOODS AND SERVICES (BALANCE OF PAYMENTS BASIS) AT CONSTANT PRICES

The following tables show annual values of Australian exports and imports of goods and services at current and constant (average 1984–85) prices. These estimates are compiled on a balance of payments basis within the framework outlined below. Quarterly figures in original and seasonally adjusted terms are published regularly in *Balance of Payments, Australia* (5302.0).

The current price value of a transaction may be expressed conceptually as the product of a price and quantity. The value of the transaction at constant prices may then be thought of as being derived by substituting, for the 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.

Merchandise (Balance of Payments basis)

Prior to 1988, exports and imports of goods f.o.b. were compiled using the Australian Export Commodity Classification (AECC) and the Australian Import Commodity Classification (AICC) based on the second revision of the United Nations Standard International Trade Classification (SITC rev. 2). From 1 January 1988, exports and imports of goods f.o.b. have been compiled using the Harmonized Commodity Description and Coding System (HS) based on the third revision of the SITC (SITC rev. 3). This means that commodity data prior to 1988 are not strictly comparable with later data; however, the lack of comparability for the aggregates presented in the tables below is thought to be minor.

The published components of merchandise exports and imports of goods f.o.b. consist of varying numbers of SITC rev. 3 divisions and/or sections as shown below.

Exports	*Section or division of SITC rev. 3*	*Imports*	*Section or division of SITC rev. 3*
Rural—		Food, beverages and tobacco	0,1
Meat and meat preparations	01	Fuels	3
Cereal grains and cereal preparations	04	Chemicals (incl. plastics)	5
Sugar, sugar preparations and honey	06	Textiles, fabrics, etc.	65
Wool and sheepskins	21 (part), (26 part),	Metals and metal manufactures	67 to 69
Other rural	00,02,03,05,07	Machinery	71 to 77
	to 09, 21 (part)	Transport equipment	78, 79
	22 to 25,	Manufactures n.e.c.	61 to 64, 66
	26 (part), 29, 4		8
Non-rural—		Other imports	2, 4, 9
Metal ores and minerals	27,28		
Mineral fuels—			
Coal, coke and briquettes	32		
Other mineral fuels	33 to 35		
Metals—			
Gold	97		
Other metals	67, 68		
Machinery	71 to 77		
Transport equipment	78, 79		
Manufactures n.e.c.	5, 61 to 66, 69, 8		
Other non-rural	11, 91 to 96		

Services

Services covers services rendered by Australian residents to non-residents (credits) and by non-residents to residents (debits), together with transactions in a few types of goods (e.g. goods purchased by travellers).

Exogenous and endogenous imports

Exogenous imports comprise a group of imported goods which it has been found useful to identify separately in economic analysis because the transactions in these goods are erratic, subject to government arrangements or significantly affected by factors other than the general level of economic activity in Australia. Exogenous imports include fuels, ships, aircraft and certain other large items of equipment acquired by selected public and private sector trading enterprises, defence goods and certain other government goods.

Endogenous imports comprise imports of all goods other than those regarded as exogenous.

Endogenous imports are classified into three classes—*consumption goods, capital goods* and *other goods*—according to the United Nations' classification by broad economic categories (BEC). Other goods covers the BEC class *intermediate goods* and the residual BEC category *goods not elsewhere specified.* The classes consist of the BEC categories (excluding goods defined as exogenous) shown below.

Consumption goods—
Food and beverages, primary, mainly for household consumption (112)
Food and beverages, processed, mainly for household consumption (122)
Passenger motor vehicles (51)
Transport equipment, non-industrial (522)
Consumer goods, not elsewhere specified (6)

Capital goods—
Capital goods (except transport equipment) (41)
Transport equipment, industrial (521)

Other goods—
Food and beverages, primary, mainly for industry (111)
Food and beverages, processed, mainly for industry (121)
Industrial supplies not elsewhere specified (2)
Parts and accessories of capital goods (except transport equipment) (42)
Parts and accessories of transport equipment (53)
Goods not elsewhere specified (7).

EXPORTS OF GOODS AND SERVICES (BALANCE OF PAYMENTS BASIS) AT CURRENT AND AVERAGE 1984–85 PRICES
($ million)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
AT CURRENT PRICES						
Rural exports f.o.b.						
Meat and meat preparations	1,393	1,371	1,699	2,244	2,555	2,249
Cereal grains and cereal preparations	2,773	3,855	3,880	2,778	2,202	2,729
Sugar, sugar preparations and honey	676	615	646	708	698	885
Wool and sheepskins	2,000	2,573	3,061	3,888	5,811	5,939
Other (dairy produce, fruit, etc.)	2,145	2,438	2,968	3,521	3,976	4,015
Total rural	*8,987*	*10,852*	*12,254*	*13,139*	*15,242*	*15,817*
Non-rural exports f.o.b.						
Metal ores and minerals	4,229	4,722	5,003	4,956	5,455	6,586
Mineral fuels—						
Coal, coke and briquettes	3,338	4,665	5,240	5,456	4,850	4,737
Other	1,437	2,360	2,299	1,515	1,779	1,258
Metals—						
Gold	379	556	787	1,552	2,563	2,731
Other metals	1,987	2,335	2,527	2,899	3,749	4,662
Machinery	883	940	1,139	1,595	1,835	1,869
Transport equipment	496	714	474	1,034	957	886
Manufactures n.e.c.	1,562	1,662	1,859	2,363	2,941	3,276
Other non-rural	384	406	626	914	1,170	1,225
Total non-rural	*14,695*	*18,360*	*19,954*	*22,284*	*25,299*	*27,230*
Total exports f.o.b.	*23,682*	*29,212*	*32,208*	*35,423*	*40,541*	*43,047*
Exports of services	*4,913*	*5,543*	*6,485*	*7,725*	*9,518*	*10,856*
Total exports of goods and services	**28,595**	**34,755**	**38,693**	**43,148**	**50,059**	**53,903**
AT AVERAGE 1984–85 PRICES						
Rural exports f.o.b.						
Meat and meat preparations	1,477	1,371	1,639	1,930	2,130	1,866
Cereal grains and cereal preparations	2,853	3,855	3,957	3,462	2,764	2,575
Sugar, sugar preparations and honey	586	615	640	653	640	672
Wool and sheepskins	2,224	2,573	2,823	3,253	3,204	2,898
Other (dairy produce, fruit, etc.)	2,287	2,438	2,891	3,170	3,125	3,162
Total rural	*9,427*	*10,852*	*11,950*	*12,468*	*11,863*	*11,173*
Non-rural exports f.o.b.						
Metal ores and minerals	4,656	4,722	4,819	4,733	5,219	5,314
Mineral fuels—						
Coal, coke and briquettes	3,635	4,665	4,886	5,232	5,543	5,319
Other	1,647	2,360	2,275	2,347	2,542	2,248
Metals—						
Gold	342	556	664	1,032	1,561	2,060
Other metals	2,190	2,335	2,475	2,543	2,662	2,848
Machinery	940	940	1,063	1,458	1,647	1,650
Transport equipment	551	714	466	934	868	837
Manufactures n.e.c.	1,635	1,662	1,718	1,954	2,184	2,387
Other non-rural	425	406	594	811	1,007	946
Total non-rural	*16,021*	*18,360*	*18,960*	*21,044*	*23,233*	*23,609*
Total exports f.o.b.	*25,448*	*29,212*	*30,910*	*33,512*	*35,096*	*34,782*
Exports of services	*5,152*	*5,543*	*5,897*	*6,536*	*7,617*	*8,425*
Total exports of goods and services	**30,600**	**34,755**	**36,807**	**40,048**	**42,713**	**43,207**

IMPORTS OF GOODS AND SERVICES (BALANCE OF PAYMENTS BASIS) AT CURRENT AND AVERAGE 1984–85 PRICES
($ million)

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
			AT CURRENT PRICES			
Food, beverages and tobacco	1,211	1,476	1,705	1,936	2,013	2,200
Fuels	2,209	2,321	1,909	1,751	2,036	2,014
Chemicals (incl. plastics)	2,155	2,567	3,003	3,466	4,280	4,973
Textile, fabrics, etc.	1,304	1,452	1,669	1,830	1,931	2,002
Metals and metal manufactures	1,143	1,462	1,695	1,845	2,205	2,625
Machinery	6,325	8,308	10,827	11,360	12,230	13,793
Transport equipment	2,936	4,512	5,415	4,502	4,152	6,849
Manufactures n.e.c.	4,681	5,930	6,892	7,700	8,563	9,766
Other imports	1,533	2,065	2,561	2,769	2,976	2,810
Total imports f.o.b.	*23,497*	*30,093*	*35,676*	*37,159*	*40,386*	*47,032*
of which:						
Exogenous	3,098	4,237	4,539	4,459	3,829	4,207
Endogenous—						
Consumption goods	5,616	6,918	8,123	8,296	9,348	11,432
Capital goods	4,936	6,567	8,146	8,031	8,578	10,583
Other goods	9,847	12,371	14,868	16,373	18,631	20,810
Total endogenous	*20,399*	*25,856*	*31,137*	*32,700*	*36,557*	*42,825*
Imports of services	*7,695*	*9,412*	*10,411*	*10,858*	*12,256*	*13,673*
Total imports of goods and services	**31,192**	**39,505**	**46,087**	**48,017**	**52,642**	**60,705**
			AT AVERAGE 1984–85 PRICES			
Food, beverages and tobacco	1,350	1,476	1,488	1,532	1,632	1,938
Fuels	2,370	2,321	2,070	2,753	2,935	3,620
Chemicals (incl. plastics)	2,328	2,567	2,608	2,769	3,284	3,779
Textiles, fabrics, etc.	1,489	1,452	1,444	1,426	1,452	1,572
Metals and metal manufactures	1,267	1,462	1,455	1,424	1,606	1,813
Machinery	6,805	8,308	9,529	9,280	10,829	13,799
Transport equipment	3,310	4,512	4,404	3,167	2,808	5,175
Manufactures n.e.c.	5,167	5,930	5,891	5,754	6,309	7,419
Other imports	1,683	2,065	2,251	2,173	2,282	2,184
Total imports f.o.b.	*25,769*	*30,093*	*31,140*	*30,278*	*33,137*	*41,299*
of which:						
Exogenous	3,395	4,237	4,468	5,060	4,598	5,768
Endogenous—						
Consumption goods	6,492	6,918	6,886	6,216	6,989	8,994
Capital goods	5,217	6,567	7,040	6,340	7,294	10,012
Other goods	10,665	12,371	12,746	12,662	14,256	16,525
Total endogenous	*22,374*	*25,856*	*26,672*	*25,218*	*28,539*	*35,531*
Imports of services	*8,419*	*9,412*	*8,947*	*8,659*	*9,647*	*11,439*
Total imports of goods and services	**34,188**	**39,505**	**40,087**	**38,937**	**42,784**	**52,738**

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 economics activities was reintroduced 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 undertaken in the current program.

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 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 the 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:

(a) in enterprises operating in Australia; or

(b) 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 (such as 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 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. Enterprises in which there are no dominant investors holding at least 25 per cent of the voting shares but all the voting shares are held by foreign residents are also classified to foreign control.

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:

(a) 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

(b) 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 (at the reference period pertinent to each study) 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 to foreign control, joint foreign and Australian control, 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 (such as value added, type of expenditure, premiums received, assets, gross value of agricultural commodities produced or value of imports) 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 two tables the classification 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 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—			
Manufacturing industry	1982–83	value added	31,059.1	12.2	12.7	1.8	6.2	32.9	67.1	100.0
Transport industry	1983–84	value added	6,959.7	1.0	2.9	0.4	0.9	5.1	94.9	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
Agriculture—										
Agriculture 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
			$ million							
Mining industry	1984–85	value added	10,609.9	21.7	13.3	1.9	7.8	44.7	55.3	100.0
Private sector construction industry	1984–85	value added	7,950.5	1.4	3.6	2.8	1.6	9.6	90.4	100.0
Banking industry	June 1986	asset	154,587.8	5.3	7.5	8.2		21.0	79.0	100.0
Registered financial corporations	June 1986	assets	105,090.9	11.4	10.8	13.1		35.4	64.6	100.0

(*a*) Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands.

CONTROL SUMMARY BY COUNTRY OF CONTROL

Industry/activity	Reference period	Control measured in terms of:	Total value of measure used	Foreign control: USA	UK	Other E.E.C. (a)	Other	Total	Joint foreign and Australian Control	Naturalised and Naturalising	Australian Control	Total
			$ million	—per cent—								
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
Transport industry	1983–84	value added	6,959.7	0.4	2.3	0.4	0.2	3.4	0.1		96.5	100.0
Life insurance industry	1983–84	premiums received	3,306.8	2.9	15.7	4.6	3.4	26.6	(b)n.a.	..	73.4	100.0
General insurance industry	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	gross value of agricultural commodities produced	15,317.2	0.5	0.5	0.5		1.5	0.2		98.2	100.0
Mining industry	1984–85	value added	10,609.9	7.9	5.8	1.5		15.2	24.8	11.5	48.5	100.0
Private sector construction industry	1984–85	value added	7,950.5	1.1	3.2	4.7	1.0	10.0	0.4	..	89.6	100.0
Private mineral exploration other than for petroleum	1984–85	exploration expenditure	437.3	14.6	13.2	4.8	3.2	35.9	16.7		47.5	100.0
Private petroleum exploration	1984–85	exploration expenditure	803.2	22.3	7.9	3.9	3.2	37.3	6.2		56.5	100.0
Imports	1984–85	value of imports	29,050.8	18.9	12.5	4.4	17.4	53.2	0.5	0.2	46.1	100.0
Exports	1985–86	value of exports	32,321.2	13.9	7.9	3.8	10.1	35.6	0.4	8.3	55.6	100.0
Research and experimental development	1986–87	expenditure	118.9	12.5	8.9	1.5	8.5	31.5	0.3	6.9	61.3	100.0
Banking industry	June 1986	assets	154,587.8	1.1	1.1	3.0		5.1	1.3	..	93.6	100.0
Registered financial corporations	June 1986	assets	105,090.9	10.6	9.0	9.2		28.9	2.4	..	68.7	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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Other Publications
Related publications are available from:
Australian Customs Service—
Australian Customs Tariff
Customs (Prohibited Imports) Regulations

Other Information
Foreign Trade Statistics

In addition to the publications listed above, foreign trade statistics are also available via a number of special services which are described below. These services provide data on a monthly, quarterly or less frequent basis.

Special returns service: Subscribers to this service can receive foreign trade statistics at a particular commodity level on computer produced printout or via the electronic mail service TELESTATS. These statistics are available approximately 4 weeks after the end of the reference period in one or more of a limited number of formats, for a charge consistent with the level of detail required.

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 statistics for a large number of commodities.

Magnetic tape service: Statistics for imports, exports and import clearances are available on 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.

To satisfy special needs, where none of the standard output referred to above are appropriate, special 'customised' reports can also be made available. These can be provided on floppy disk if required.

Payment is generally required in advance for all these services.

Foreign Investment and Balance of Payments Statistics

Foreign investment and balance of payments statistics are available on TELESTATS, AUSSTATS, DISCOVERY and floppy disk (balance of payments only). In addition, much unpublished information is available on request for a charge. The ABS should be contacted to obtain details about the availability of unpublished information.

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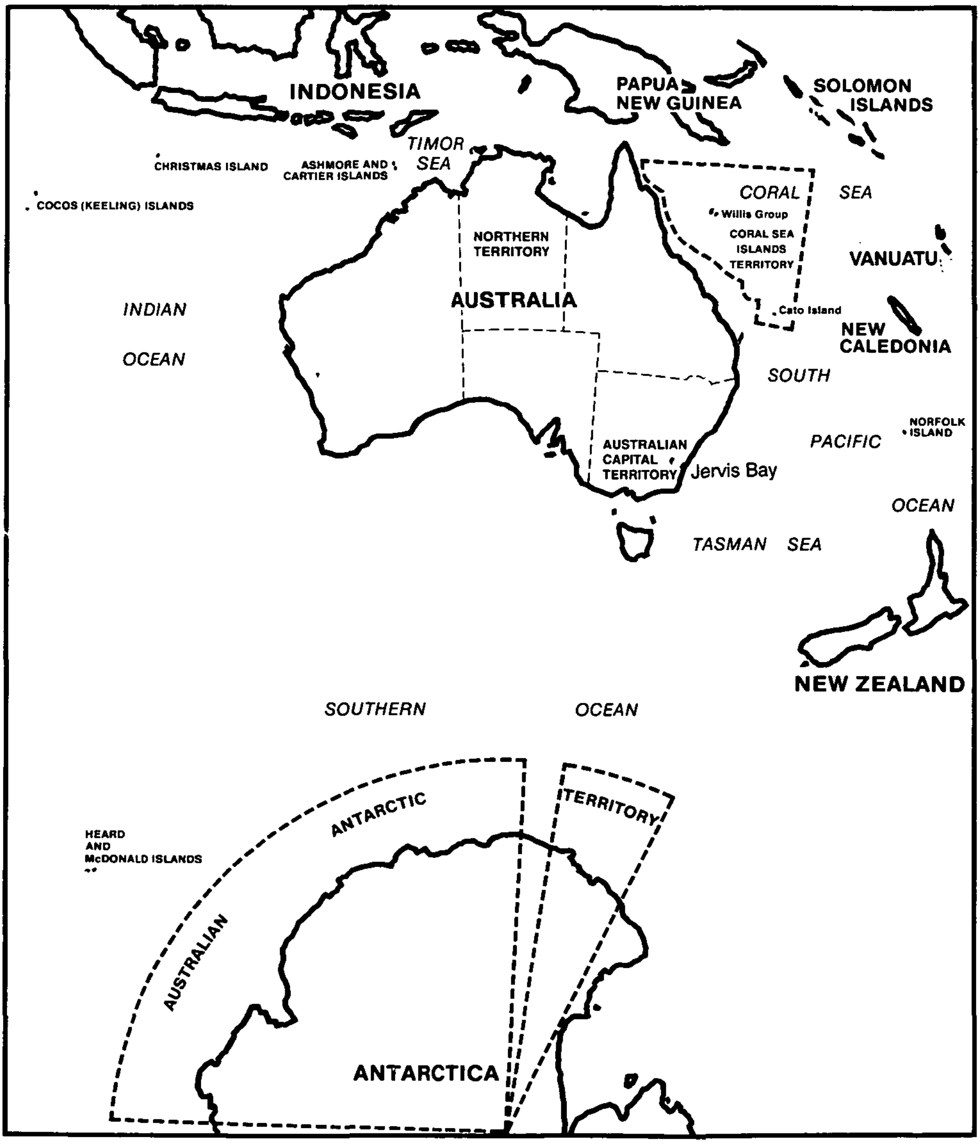
THE TERRITORIES OF AUSTRALIA



Source—Overseas Information Branch, Department of Foreign Affairs and Trade

The internal Territories of Australia are the Northern Territory, the Australian Capital Territory and the Jervis Bay Territory. The seven external Territories under Australian Administration 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 Australian Bureau of Statistics. 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 seat of Government is Darwin on the north coast. The estimated resident population of the Darwin Statistical Division at 30 June 1989 was 72,800.

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 composed of all Northern Territory Ministers, led by the Chief Minister, and acts with the advice of the Executive Council on all matters transferred to the Northern Territory. The Administrator 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 who 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 later 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, formed the Executive Council of the Northern Territory. A Northern Territory Government, comprising 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 Northern Territory has a mainland coastline that is 5,100 kilometres long, with a further 2,100 kilometres of coast around off-lying islands. A broad, shallow, low-gradient continental shelf, being less than 200 metres deep, runs for more than 140 kilometres offshore. Most of the coast is low-lying; cliffs, rarely exceeding 20 metres high, have been cut into weathered lateritic rocks, and there are active and cemented dunes more than 50 metres high on the western shore of the Gulf of Carpentaria. Coral reefs are best developed on the north coast and around off-lying islands. Most of the coastline consists of unvegetated mudflats or mangrove swamps which cover an area of approximately 2,400 square kilometres. The large tidal range of the north-western coast and the low gradient of the coastal lowlands means that some of the larger rivers are tidal for more than 100 kilometres upstream from their mouths. There are extensive seasonally-flooded coastal plains and black soil plains fringing the river systems, between the dissected lateritic lowlands, along much of the coast to the north-west and around the Gulf of Carpentaria.

Inland, the coastal lowlands merge into the dissected sandstone plateaus of Arnhem Land to the north, the granitic and sandstone Ord–Victoria river plateaus to the west, with rounded ridges of largely metamorphic rocks between those plateaus. The central section of the Northern Territory is formed of shallowly dissected lateritised sandstone ridges and sandplains. To the west there are the Lander dunefields with east–west trending longitudinal dunes and to the east the black clay plains and limestone or sandstone rises of the Barkly Tablelands. The southern end of the Northern Territory is dominated by the Central Australian Ranges. These consist of granitic, sandstone and quartzitic ridges, separated by sandplains or stony lowlands. The folded Macdonnell Ranges, running east–west, contain the highest point in the Territory, Mount Zeil, 1,511 metres high. To the south-east there is a part of the Simpson Desert with north-west–south-east trending longitudinal dunes.

There are two main climatic divisions: the wet season from November to April; and the dry season from May to October. The changes of weather are uniform and regular. Nearly all the rainfall occurs in the summer months.

Fauna and flora of the Northern Territory

The Northern Territory contains an immense array of faunal habitats, from arid deserts to the wet/dry tropics. Consequently, the fauna is characterised by species abundance, many of which are endemic to the Territory.

There are about 378 species of birds, 295 reptiles, 125 mammals, 44 amphibians and 100,000 species of insects, well represented by termites, ants and butterflies. In contrast to these distinctly Australian terrestrial fauna, the marine fauna of the Northern Territory is very similar to the Indo–Malay Archipelago immediately to the north.

The Northern Territory is famous for the saltwater crocodile which inhabits most rivers within 100 kilometres of the coast. It is also noted for its introduced feral animals, particularly herds of wild buffalo, banteng cattle, Timor ponies, samba deer, camels, pigs and donkeys.

The most distinct faunal region is centred on the sandstone escarpment of Arnhem Land, including Kakadu National Park which is on the World Heritage List. Amongst the endemic fauna to be found there are the black wallaroo, the white-striped sheath-tailed bat, the blackbanded pigeon and the white-throated and Carpentaria grass-wrens. There are also endemic fish (rainbow and primitive archer fish), insects (Leichhardt's grasshopper), and reptiles (Oenpelli python, a gecko, and a stunted variety of Johnston's freshwater crocodile).

In the central deserts surrounding Alice Springs, the harsh climate promotes crypticism among the smaller native species, but population explosions of rodents and small marsupials occasionally emerge following suitable rainfall. Distinctly Australian species include the bilby (a bandicoot), the thorny mountain devil (a lizard) and the Major Mitchell cockatoo. Snakes, many of which are venomous, are common throughout all habitats in the Territory. Introduced pests, especially the rabbit, can become extremely abundant in arid areas and constitute a serious threat to the pastoral industry. Similarly, the introduced fox and feral cats have been implicated in the decline or extinction of several native species.

Northern Territory vegetation is Australian in character although there is a significant component of the flora derived from the Indo–Malayan regions. In the 'Top End', the monsoon climate, the frequent fires associated with it and the poor soils, support eucalypt forests with open savanna understoreys. Pockets of monsoon forests, similar to rainforest, occur on sites with superior moisture supply during the seven month drought. Associated with the lower rainfall further inland, the height and density of forests decreases to form low woodlands. On the Barkly Tablelands and parts of the Victoria Rivers district, savanna with scattered shrubs occurs. On the sandy plains of the interior and on the rugged sandstone escarpments, spinifex grasses predominate with occasional stunted shrubs. The country surrounding Alice Springs carries acacia scrub called 'mulga'. Where this community has been severely disturbed it is replaced by spinifex. There are some 190 different families of vascular plants in the Northern Territory with over 3,400 species. However, little of the area has been well studied and future exploration will add to our knowledge, especially in the central and northern portions of the Territory for which there are no published floras.

Water

The Power and Water Authority (PAWA) 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 Uluru (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, situated 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 and the Tindal RAAF Base are supplied with treated water from the Katherine River. This water is blended with bore water to enhance the quality and to conserve the limited river supply in the dry season.

Alice Springs, Tennant Creek and all other towns and communities are supplied by bores from groundwater sources.

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 government and private sectors.

Population

The population of the Northern Territory at 30 June 1989 was 156,100 persons. For further information, *see* Chapter 6, Demography.

Aboriginal Affairs

Policy

The Government is committed to policies of Aboriginal self-management at all levels. Involvement of Aboriginal people 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 access to government services for Aboriginal people equal to that accorded other Australian citizens, together with additional services appropriate to Aboriginal peoples' state of disadvantage, and in recognition of a community obligation deriving from Aboriginals' past dispossession and dispersal.

The long term objective is to achieve a situation of justice and equality where Aboriginal people have sufficient economic and social independence to enjoy their rights as Australian citizens.

Legal status

As Australian citizens, Aboriginal people are entitled to equality before the law. For the purpose of administering various programs designed to benefit Aboriginal people, the Aboriginal and Torres Strait Islander Commission (ATSIC) 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

Aboriginal people who are able to prove strong traditional links with unalienated Crown Land in the Northern Territory 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.

Minerals on Aboriginal land remain the property of the Crown. The Aboriginal Land Rights Act provides that mineral exploration and mining 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 Aboriginal Associations and Corporations representing 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 Government and the Northern Territory Government in relation to payments in lieu of royalties.

In September 1989, a Memorandum of Agreement was signed between the Commonwealth Government and the Northern Territory Government to provide for Community Living Areas in the pastoral districts of the Northern Territory.

Aboriginal communities are also being assisted to purchase land on the open market. The Aboriginal and Torres Strait Islander Commission continues to assist 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 equal 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 Aboriginal people

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 Aboriginal people 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 21 schools, using 17 Aboriginal languages. Aboriginal independent community schools, supported by the Government, also operate bilingual education programs.

Land tenure

As at June 1990, 57,628 square kilometres were held under freehold title; 735,300 square kilometres under leasehold; 475,572 were Aboriginal freehold (this figure includes land granted under the *Aboriginal Land Rights (NT) Act 1976* and land which has since been claimed and over which title has been granted); and 77,700 square kilometres unalienated. Land rent collected for the year 1988–89 amounted to $484,000.

Following the report of the Aboriginal Land Rights Commissioner in April 1974, the Commonwealth Government introduced the *Aboriginal Land Rights (NT) Act 1976.* This Act which commenced on Australia Day, 26 January 1977, gave traditional Aboriginal people inalienable freehold title to former Aboriginal reserves and some other land, amounting to approximately 19 per cent of the Northern Territory, and provided a procedure for them to claim title to other areas of unalienated Crown Land.

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.

Additional amendments to the Crown Lands Act were introduced in 1983 which enable pastoral lease holders to apply to have their leases converted to perpetual tenure after certain criteria have been complied with.

The various forms of lease or licence of lands are described below.

Pastoral leases	—granted for periods not exceeding 50 years.
Perpetual pastoral leases	—granted in perpetuity and are only granted after certain criteria have been complied with.
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

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, Brunei and the Philippines; 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. In 1988–89, export licensed abattoirs operated in Tennant Creek, Katherine and Batchelor, 100 kilometres south of Darwin. The former abattoir processes both cattle and horses while the latter two process both cattle and buffalo for export. The gross value of cattle production in 1988–89 was $130 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 planned removal of all tuberculosis-infected feral buffalo as part of a national campaign to eradicate bovine tuberculosis. Buffalo are slaughtered predominantly for the European and Taiwanese markets. High prices are realised for export sales of quality breeder buffalo and small volumes of high quality grain-fed buffalo meat that is sold to domestic hotels and restaurants. The gross value of the buffalo industry in 1988–89 was in the order of $8 million.

Both the cattle and buffalo industries of the Northern Territory are experiencing dramatic changes in management practices due to the campaign to eradicate 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. This has necessitated substantial investment in boundary and internal fencing as well as the destocking of unmanageable areas.

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 developed six project farms in the Douglas–Daly basin, 250 kilometres from Darwin. These, plus other farms in the Katherine district provide a commercial environment for the development of the required levels of agronomic and economic efficiency. The main crops grown are sorghum, maize, sesame, soybean and mungbean. Grain handling depots have been established at Katherine and Douglas–Daly. The ADMA Act faces its sunset clause in 1990 and the grain marketing function has been transferred to a grower-controlled Grain Marketing Board. Gross value of production in 1988–89 was about $2 million. Production is mainly oriented to supplying local stockfeed requirements with small quantities of high valued grains sold interstate and overseas.

The horticultural industry in the Northern Territory has experienced very rapid expansion over the last five years. Value of production has increased from just over $200,000 in the early 1980s to in excess of $13 million in 1988–89. Very significant plantings of mangoes are in their first years of production and yields will continue to expand as trees mature. 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 substantial industry. The Northern Territory has a natural advantage for horticultural production due to its capacity to produce some of the earliest maturing products in Australia for many lines of tropical fruit and vegetables. Significant volumes, mainly rockmelons, are exported to Asian markets and potential for expansion has been identified.

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	Total: Percentage of NT land area (134,620,000 hectares)
		—'000 hectares—				%
1983–84	283	5.2	32.6	73,648.7	73,686.5	54.7
1984–85	274	5.9	45.3	74,116.8	74,168.0	55.1
1985–86	276	7.1	32.8	72,882.5	72,922.4	54.2
1986–87	290	11.7	51.1	71,175.2	71,238.0	52.9
1987–88	278	13.1	64.4	69,504.5	69,582.0	51.7
1988–89	270	10.6	146.5	68,169.8	68,326.9	50.8

(a) Excludes duplication on account of area double cropped. *(b)* Used for grazing, lying idle, fallow, etc.

NORTHERN TERRITORY: AGRICULTURAL STATISTICS

	Unit	1986–87	1987–88	1988–89
Livestock numbers—				
Cattle	'000	1,439.3	1,384.7	1,388.0
Domesticated buffaloes	'000	15.0	15.6	13.3
Poultry	'000	239.0	237.5	220.9
Pigs	'000	7.0	3.2	2.7
Gross value of livestock slaughterings—				
Cattle and calves including domesticated buffaloes	$'000	102,700	82,219	70,026
Crops, Area—				
Grain Sorghum (grain and feed)	Hectares	6,401	5,018	5,324
Hay	Hectares	403	346	935
Tree fruit	Hectares	389	379	725
Bananas	Hectares	42	145	211
Vegetables	Hectares	453	549	490
Pastures and grasses (hay, seed, green feed)	Hectares	4,843	3,942	4,132
Total area used for crops (incl. pastures and grasses)	Hectares	16,590	17,003	14,758
Crops, Production—				
Sorghum for grain	Tonnes	6,863	6,803	7,795
Hay	Tonnes	1,272	1,016	3,895
Bananas	Tonnes	816	499	625
Pastures and grasses (hay, seed)	Tonnes	2,292	6,441	8,235
Gross value of crops—				
Sorghum for grain	$'000	1,098	1,261	1,485
Fruit	$'000	1,406	1,604	2,180
Vegetables	$'000	5,387	8,149	7,876
Pastures and grasses	$'000	55	689	1,193
Total crops (incl. pastures and grasses)	$'000	12,277	15,884	17,323
Gross value of agriculture	$'000	123,133	107,506	98,174

Mining

Mining activity in the Northern Territory has intensified in 1988–89.

Gold, lead, zinc, silver, uranium, bauxite/alumina and manganese are the principal minerals.

Uranium is mined in the Alligator River region, bauxite in the Gove Peninsula and manganese on Groote Eylandt. Gold is produced in the Pine Creek, Tanami Desert, Alice Springs, Hayes Creek and Tennant Creek regions.

The total value of mineral production for 1989 was $950 million.

NORTHERN TERRITORY: MINING ESTABLISHMENTS

		1985–86	*1986–87*	*1987–88*
Establishments operating end of June	No.	26	33	37
Average employment over whole year—persons*(a)*	No.	1,903	2,128	2,188
Wages and salaries*(b)*	$m	57.7	70.2	80.2
Turnover	$m	615.5	826.9	1,063.9
Opening stocks at 30 June	$m	153.7	208.0	277.2
Closing stocks at 30 June	$m	184.2	286.9	293.9
Purchases, transfers in and selected expenses	$m	165.5	194.7	214.9
Value added*(c)*	$m	480.5	711.2	865.8
Fixed capital expenditure*(d)*	$m	n.a.	n.a.	153.8

(a) Includes working proprietors. *(b)* Excludes amounts drawn by working proprietors. *(c)* 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'. *(d)* Outlay on fixed tangible assets less disposals.

Offshore petroleum resources

The Timor Sea is well positioned to take over from the Bass Strait as Australia's most promising oil producing region.

Exploration effort into the search for oil resulted in an total of 17 offshore wells and nine onshore wells being approved in 1988–89.

A total of 120,000 line kilometres of seismic surveys has been undertaken in Northern Territory waters since 1976.

Oil and gas production in the Northern Territory is expected to be around one billion dollars in 1990–91.

Forestry

Significant use of accessible timber resources in the Northern Territory has been mainly related to particular historical events, for example, the Overland Telegraph railway construction and war-time defence applications.

Following an extensive assessment of the natural resource in the early 1950s, a research station was established in Darwin by the Forestry and Timber Bureau in 1959. A state-type service was undertaken by the Department of the Northern Territory from 1967.

With the granting of self government in July 1978, forestry became the responsiblity of the Territory Parks and Wildlife Commission, now the Conservation Commission of the Northern Territory. The unit was responsible for plantation forestry establishment and management until 1986, and for an Urban Beautification and Planting Program until 1988.

In 1986, all plantations and associated assets on Melville Island were transferred to Tiwi Aboriginal control. A joint venture company, Melville Forest Products Pty Ltd, has since been formed to manage the project on a private enterprise basis. Plantation thinnings provide the resource for current production of poles and bark by-products. The Conservation Commission continues to undertake plantation research and provide related advisory services.

In its conservation role, forestry related functions are now shared between several Conservation Commission projects. These embrace plant community and fire ecology studies, vegetation mapping, herbarium and botanical services, flora conservation, utilisation, silvicultural research, extension and advisory services.

Fishing

Seafood landings in the Northern Territory for the 1988–89 financial year were 6,430.1 tonnes with an estimated value of $29.7 million. Prawn landings continue to dominate the industry with 3,360.1 tonnes being landed having an estimated value of $22.6 million.

Barramundi remains the second most important species harvested followed by mud crab. These two species accounted for 613.0 tonnes and 143.4 tonnes of landings with estimated values of $2.2 million and $0.88 million respectively. The success of the dropline fishery and establishment of markets for fresh fish has also produced substantial increases in the landings of reef fish, snapper and emperor.

To prevent over-exploitation and maintain the long term viability of the industry, strict management measures are in force for the prawn, barramundi and mud crab fisheries. Major reviews of the barramundi and mud crab fisheries were undertaken during 1988 and 1989 with a view to the implementation of formal management plans by January 1 1991.

Harvesting of pearl oyster shell commenced in the Territory in 1988. A total of six licences were issued to operate in the fishery, each with a quota of 20,000 shells per year. Up to 10,000 shells of an individual quota may be utilised for mother of pearl, the remainder being for pearl culture.

Foreign fishing arrangements entered into by the Commonwealth in 1988–89 provided for Thai, Taiwanese and Chinese vessels to operate in the north and north-west waters of Australia. These agreements allow for a total quota of 19,650 tonnes of demersal trawl fish to be taken by 16 stern trawlers and 36 pairs of trawlers.

NORTHERN TERRITORY: PRINCIPAL FISHERIES

		1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Prawns—							
Estimated gross weight of prawn catch	Tonnes	2,462	2,154	3,302	3,481	3,880	3,361
Gross value of prawns	$'000	17,587	13,837	24,661	31,145	38,859	22,546
Fish—							
Estimated live weight of fish catch	Tonnes	1,564	1,784	2,523	2,550	2,576	2,886
Gross value of fish	$'000	2,584	2,800	3,973	4,393	4,852	5,722

Secondary industries

The development of secondary industries in the Northern Territory has been largely based on demand from local markets, processing of primary production for exports and exports in the mining and construction industries. Considerable development is occurring in the support industry to service offshore oil and gas activities in the Timor Sea region.

The isolation of the Northern Territory from the major population areas of Australia and resultant high transportation costs have made other than local market expansion difficult, but this is changing.

Industrial expansion will be small while industry is limited to local markets, but determined efforts are being made to take advantage of the proximity of Darwin to rapidly expanding South-East Asian markets. 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 1984–85, 1986–87 and 1987–88. No Manufacturing Census was conducted in respect of 1985–86.

NORTHERN TERRITORY: MANUFACTURING ESTABLISHMENTS

	Unit	*1984–85*	*1986–87*	*1987–88*
Establishments at 30 June	No.	137	145	172
Persons employed*(a)*	No.	2,686	2,864	3,207
Wages and salaries*(b)*	$m	58.3	675	81.5
Turnover	$m	407.4	404.7	450.7
Wages and salaries per employee	$'000	21.7	23.6	25.4
Persons employed per establishment	No.	20	20	19
Turnover per person employed	$'000	151.7	141.3	140.5

(a) Includes working proprietors. *(b)* Excludes drawings of working proprietors.

Tourism, Parks and Reserves

Tourism is second only to mining as the Northern Territory's most important industry, with direct earnings for 1988–89 estimated at $400 million.

In 1981–82, 411,000 people travelled to the Territory, increasing to 835,000 in 1988–89. The Territory's obvious growth continues to encourage investment in tourism related properties and, since the early 1980s, well over $700 million has been invested in tourism related facilities in the Territory.

Major developments include the Casinos and Sheraton Hotels in Darwin and Alice Springs, the Yulara Resort, the Beaufort Hotel and Convention facility in Darwin and the Territory Wildlife Park at Berry Springs. One of the most unusual developments has been a hotel in Kakadu which is shaped like a 250 metre long crocodile.

A wilderness lodge has been established at Seven Spirit Bay on the Cobourg Peninsula and there are plans for other major wilderness attractions and facilities at King's Canyon and Litchfield Park.

Since the Northern Territory Tourist Commission was formed in 1980, it has been responsible for the promotion of tourism in the Territory. The Commission has its head office in Alice Springs, a regional office in Darwin and bureaus in all States except Tasmania and the ACT which are serviced by the Victorian and New South Wales bureaus respectively. The Northern Territory Tourist Commission has overseas offices in London, Tokyo, New York, Vancouver, Frankfurt, Los Angeles, Singapore and Auckland.

The Tourist Commission's budget for 1989–90 was $20.2 million.

There are 52 parks and reserves, covering about 5,200 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 historic features and the encouragement of public use and enjoyment of land set aside under its control.

In addition, the Gurig National Park (2,207 square kilometres) is managed by Cobourg Peninsula Sanctuary Board, while the Kakadu National Park (19,500 square kilometres) and Uluru National Park (Ayers Rock–Mt Olga) are managed by the Australian National Parks and Wildlife Service. Uluru is managed in conjunction with the Park's traditional Aboriginal owners. Visitors to Uluru National Park have increased from an estimated 86,900 in 1981 to more than 250,000 in 1988 while at Kakadu National Park numbers have increased from 31,500 to 240,000 in the same period.

Railways and Roads

Railways

Passenger and freight train services commenced in December 1980 over the then new 831 kilometres long standard gauge Tarcoola–Alice Springs railway.

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, and is sealed over its full length.

The Barkly Highway is the principal route to and from Queensland via Mount Isa. It is 636 kilometres long, 432 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, is part of 'Highway 1' and is the principal route connecting the Western Australia and the Northern Territory, intersecting the Stuart Highway at Katherine. The distance from the town of Katherine to the Western Australian border is 468 kilometres. Seventy-five percent of the pavement is narrow seal. A federally funded program is now in force to upgrade all narrow sections to National Highway standards within the next five years.

The Victoria Highway is servicing the local cattle, mining and tourist industries and is of vital importance for defence purposes, connecting the east and west of Northern Australia.

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 1970s and is continuing to bring these roads to National Highway Standards.

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.

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 in the Territory in fulfilling the responsibility to educate their children according to the individual needs and abilities of those children;
- make education services, provided by the Minister, available to all people in the Territory; and
- 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

There are 176 schools in the Northern Territory with a total student population of approximately 35,669. About 30 per cent of students are of Aboriginal descent. In addition to primary and pre-schools, there are 16 government secondary schools, one secondary correspondence school and six private secondary schools (including Kormilda, a residential college) and one government residential college for Aboriginal students, Yirara College.

Teaching staff are employed by the Northern Territory Teaching Service and qualified persons are recruited from all parts of Australia. An increasing number of teachers with qualifications obtained from the Northern Territory University are also entering the Northern Territory Teaching Service.

Nearly all children in the Northern Territory enrol in pre-school education when they turn four. At the age of five they enter a Transition Year prior to joining Year One. The length of time spent in Transition depends on a child's readiness for Year One, varying from three months to a year.

There are seven years of primary education (Years One to Seven) with students entering high school at Year Eight.

With the exception of Year Twelve 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. The Board oversees the work of 11 subject area committees. In addition, there are advisory committees on Early Childhood Education, Special Education, Education for the Gifted and Post Compulsory Education which provide input to the Board. Each subject area committee is responsible for its subject area at all levels of schooling.

In addition to its responsibility for advising the Secretary on curriculum development, the Board of Studies provides: guidelines on the assessment of student performance, examples of assessment instruments and, in some subjects, moderation of student assessment. School assessments in English and Mathematics at Years Ten and Eleven are fully moderated and school assessments in these subjects in Year Ten are augmented by an external assessment which contributes 30 per cent of a student's final score. The Junior Secondary Studies Certificate is issued by the Northern Territory Board of Studies to students on completion of Year Ten. Students studying beyond Year Ten will be awarded the Senior Secondary Studies Certificate showing courses satisfactorily completed in Years Eleven and Twelve.

The two Schools of the Air in the Northern Territory, one at Katherine and one at Alice Springs, 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, Katherine and Darwin for disabled children. However, where appropriate, students with special needs are integrated into primary and secondary schools. Guidance and Special Education Advisory Services operate from Regional Offices.

Requests to the Department of Education from geographically isolated communities for educational services continue to grow. School buildings and educational services are being provided in an increasing number of remote locations. Projects involving classroom teachers and curriculum staff have been carried out to address the appropriateness of teaching methods, suitability of materials, and relevance to courses in response to the challenge of providing education to isolated homeland centre groups.

Government schools for Aboriginal children in the smaller remote centres provide education at the primary level only. In the larger communities, Community Education Centres are being established to provide a comprehensive range of education services, from pre-school through to nationally accredited TAFE courses.

Bilingual education programs have been offered in Northern Territory schools in Aboriginal communities for almost twenty years now. There are 21 formal bilingual programs in 17 Aboriginal languages for approximately 3,500 students. Many school children are acquiring initial literacy skills in their own languages and this is being extended to include adults where feasible. Many other schools include Aboriginal language and culture in their curriculum.

A major initiative in the education of Aboriginal Territorians is the training and recruitment of Aboriginal persons, not just for the classroom, but to fill management positions in the school. The Mentor Scheme underpins the training of Aboriginal persons for management positions. The Scheme involves the appointment of qualified Aboriginal persons as Principals-in-Training or Deputy Principals and senior teachers 'in training' to understudy non-Aboriginal managers for about two years. The Aboriginal person, after the period of 'training', takes over the management role.

Yirara College near Alice Springs caters for secondary-aged students from outlying centres which do not have a Community Education Centre or whose parents wish them to attend courses at an urban high school. Kormilda College in Darwin, now an independent school, is developing its own range of appropriate secondary courses. While its enrolment policy is similar to Yirara, it also enrols non-Aboriginal students, either as day students or boarders.

The Northern Territory has an exchange program with Indonesia which involves up to four teachers from each country in a school year. The teachers are usually on 'exchange' for a full year whilst students 'exchange' for six months. The Northern Territory Department of Education is also involved in an expanded TAFE teacher exchange and development program with Indonesia. In addition, it has a major role in the National Indonesian Language Curriculum Development Project over three years, from 1989 to 1991.

Technical and Further Education—TAFE

Technical and Further Education services in the Northern Territory are provided by the Northern Territory University Institute of TAFE and the Department of Education through its Colleges.

The Department services the TAFE Advisory Council which advises the Minister for Education on Territory-wide TAFE policy issues. The Council membership includes representatives of employer and employee organisations and Northern Territory TAFE institutions.

Alice Springs College of TAFE

The Alice Springs College of TAFE is a multi-sector institution providing TAFE services within the Alice Springs region. It provides trade, post-trade, and other TAFE programs up to and including Associate Diplomas. The College is also the major Territory provider for all tourism and hospitality training.

Centre for Appropriate Technology

The Centre for Appropriate Technology is part of the Alice Springs College of TAFE and has a specific responsibility in the provision of technical training to traditionally oriented Aboriginal people in the Centre of Australia.

Northern Territory Rural College

The Northern Territory Rural College in Katherine provides education and training for the pastoral and agricultural industries. It offers a two-year, full-time residential course, leading to a Certificate in Rural Studies; intensive three-month long courses in basic stock-handling and station skills; and short courses in areas such as horse-handling, horse-shoeing, explosives, welding, farm mechanics, pregnancy diagnosis and artificial insemination of cattle. The College also works in cooperation with other TAFE institutions in the provision of more general TAFE programs in the Katherine area and, in particular, has responsibility for conducting pre-vocational trade training in the Katherine region.

Batchelor College

Batchelor College is a semi-autonomous tertiary institution providing programs for Aboriginal people which lead in particular to teaching qualifications at advanced education and TAFE levels. The College also offers courses for Aboriginal adult educators and health workers and conducts courses related to community management. Courses are available from Associate Diploma to Diploma level as well as providing bridging and access programs. The College is situated in the town of Batchelor and has residential facilities, although a significant proportion of its program is provided through mixed mode/on-site courses in Aboriginal communities.

Northern Territory Open College of TAFE
The Northern Territory Open College of TAFE is a distance education institution which offers services through a network of education centres and community based lecturers. The College provides adult education and training programs up to and including certificate level. The College has particular expertise in the provision of pre-trade and access programs.

The Northern Territory Open College embraces the Territory Training Centre and the Adult Migrant Education Centre which offer pre-trade training and English courses to other areas of the Territory. From 1991, the Northern Territory Secondary Correspondence School will be part of the Open College.

Northern Territory University—NTU

The Northern Territory University was established on 1 January 1989 through the amalgamation of the University College of the Northern Territory and the Darwin Institute of Technology. The University offers both higher education and technical and further education to meet its first priority of providing for the full spectrum of the tertiary educational and research needs of the Northern Territory. It is the first university in Australia to incorporate technical and further education as an integral part of its structure. The student population of approximately 5,000 is fairly evenly divided between the two sectors.

Undergraduate and postgraduate programs are offered through the faculties of Arts, Business, Education and Science. It is envisaged that the Law School within the Faculty of Arts will become the Faculty of Law by 1991. The Institute of Technical and Further Education offers programs through to Associate Diploma level.

The University also offers continuing and professional education courses to the wider community.

The University currently operates on two sites, Myilly Point on the edge of the Darwin city centre and at Casuarina, and development is planned with a view to accommodating the entire program at the latter campus by 1997.

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 1986–87 to 1989–90. 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.

NORTHERN TERRITORY: FINANCIAL TRANSACTIONS OF TERRITORY GOVERNMENT
($ million)

Economic transactions	*1987–88*	*1988–89p*	*1989–90(a)*
Current outlays	1,018	1,086	1,143
General government final consumption expenditure	690	734	787
Requited current transfer payments	146	155	157
Interest payments	146	155	157
To Commonwealth Government on advances	93	93	90
Other	53	62	66
Land rent, royalties and dividends paid	—	—	—
Unrequited current transfer payments	182	197	199
Subsidies paid to enterprises	96	124	126
Personal benefit payments	2	9	10
Current grants	76	53	54
To non-profit institutions	60	32	37
To local governments	16	21	18
Other current transfer payments	8	11	8
Capital outlays	207	204	251
Gross fixed capital expenditure	215	231	262
Expenditure on new fixed assets	218	240	271
Expenditure on second-hand fixed assets (net)	–2	–8	–9
Increase in stocks	–1	—	—
Expenditure on land and intangible assets (net)	–6	–8	–5
Capital transfer payments	10	12	14
Capital grants	10	12	14
To local governments	2	3	3
To other sectors	8	9	11
Other capital transfer payments	—	—	—
Advances paid (net)	–12	–31	–20
To local governments	2	2	—
To other sectors	–14	–33	–21
Revenue	1,124	1,215	1,212
Taxes, fees and fines	105	116	131
Net operating surpluses of public trading enterprises	50	48	53
Property income and other revenue	61	65	62
Income from public financial enterprises	—	—	2
Interest received	43	50	48
Other property income and other revenue	18	14	13
Grants received	909	987	966
Financing transactions	100	76	181
Net advances received	45	32	–9
Net domestic borrowing	67	88	81
Net borrowing from abroad	—	—	—
Increase in provisions	29	31	37
Other financing transactions	–40	–76	73
Deficit	72	44	145
Net Financial Requirement	27	12	154

(*a*) Forward estimate.

THE AUSTRALIAN CAPITAL TERRITORY

General Description

The Constitution provided that the seat of Government of the Commonwealth of Australia shall be a federal territory, located 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. The forecast population for 30 June 1991 is 287,000, nearly all of whom live in Canberra, the National Capital.

Australian Capital Territory Self-Government

The Australian Capital Territory was established as a self-governing Territory by the *Australian Capital Territory (Self-Government) Act 1988* and related legislation. There is a Legislative Assembly of 17 members to make laws for the peace, order and good government of the Territory, and an Australian Capital Territory Executive consisting of a Chief Minister and three other Ministers exercising the executive power.

Under the legislation, the Commonwealth transferred most of its powers and responsibilities concerning the administration of the Territory to the new Territorial Government. The functions which were not transferred include responsibility for the ACT Courts, policing functions, and the power for the ACT to determine its own electoral system and size of the Executive. A timetable was detailed in the Self-Government legislation for the progressive transfer of the courts and policing functions.

Elections for the first ACT Legislative Assembly took place in March 1989 and the formal transfer of power from the Commonwealth to the ACT Government followed on 11 May 1989 with the swearing in of the first Members of the Assembly.

Health

Hospital Services

Royal Canberra and Woden Valley Hospitals are the major public hospitals in the ACT. Calvary Hospital and the Queen Elizabeth II Home for Mothers and Babies also function within the public hospital system.

The hospital system provides in-patient and outpatient services including medical, surgical, psychiatric, nursing and other professional support services.

The Ambulance Service operates from four ambulance stations and provides treatment and transport for emergencies and inter-hospital transfers.

Support services for the hospitals, including laundry, sterile instrument and surgical dressing supply, maintenance, purchasing and a central store are located at the Mitchell Health Services and Supply Centre.

The Central Health Laboratory is part of the hospital system and is located at Woden Valley Hospital.

Public Health Services

The Chief Health Officer is responsible for public health matters in the ACT and administers a number of public health services. These range from Radiation Safety and Pharmaceutical Services, management of the Analytical Laboratory and communicable and environmental disease control, to the Health Surveillance Service which monitors food standards (preparation and sale), water and air pollution, inspection of hotel accommodation and restaurants and general sanitation and disposal of solid wastes.

The John Curtin School of Medical Research is located in the Australian National University. One of the School's four divisions, the Division of Clinical Science, operates from the Woden Valley Hospital, as does the University of New South Wales' Centre for Chronic Disease and Disability.

Nursing training in the ACT is conducted at the University of Canberra on behalf of the ACT Government.

Community Health Services

In the community health field, the ACT Government operates health centres, a women's health service, child health clinics, a community nursing service, school dental and speech therapy services, a service for the treatment and counselling of people with an alcohol or drug addiction and a mental health counselling and treatment service.

A range of programs is provided in health education, and to cover special health needs such as those of the elderly and the physically and intellectually handicapped.

Justice and Community Services

The ACT Housing and Community Services Bureau was created in December 1989 to better coordinate and improve efficiency in the delivery of community and social welfare services in the ACT.

Housing

Both private and public building activity have continued to expand the stock of residential dwellings in the ACT. At June 1989, there were 23,651 occupied dwellings in the Central Canberra area; 21,185 in the Woden Valley and Weston Creek area; 27,765 in the Belconnen area; 18,733 in the Tuggeranong area, and 290 elsewhere in the Territory. The total number of occupied dwellings in the Territory at June 1989 was 91,624.

Although there has been a considerable increase in the proportion of home ownership in the ACT since 1954, the demand for public housing has continued to increase. Rental accommodation and housing finance are now allocated on a means tested basis. There has also been continuing expansion of public housing stock through annual building programs and the purchase of established housing.

A range of public rental housing for low and moderate income earners is provided by the ACT Housing Trust. Continued expansion of the public rental housing stock during 1989–90 resulted in a total rental stock of 12,141 dwellings at 30 June 1990.

The Housing Trust also provides home purchase assistance to low and moderate income earners through the Commission for Housing Loans Scheme.

Correctional and Remand Services

Juvenile justice services which include the Quamby Youth Centre, are provided for the detention of juvenile offenders and remandees.

A Remand Centre at Belconnen and a Community Services Order Scheme are also operated.

Community Welfare Services

Community programs include general family casework, adoptions, emergency relief, migrant services, the Women's Information and Referral Centre, child day care, regional youth centres, grants-in-aid, support for elderly and disabled persons to remain at home, refuges for homeless persons, and the provision of community facilities.

The Office of the Youth Advocate has been established to address problems associated with the care and protection of children, particularly child abuse, as set out in the *Childrens Services Act, 1986.*

Legal Services

On self-government, the Government Law Office was established to provide a range of legal services to the Government and the people of the ACT.

Within that Office:

- the Legislative Council drafts legislation for presentation to the Legislative Assembly;
- the Government Solicitor handles much of the day-to-day legal work for the government; and
- specialist legal units provide advice to the Government on the implementation of legal programs concerned with the courts, human rights, censorship, law reform and justice.

In addition, the Office provides a range of legal and social services through the Legal Aid Office, the Registrar of Titles, the Gaming and Liquor Authority, the Consumer Affairs Bureau, the Credit Tribunal and the Public Trustee.

Land Planning and Administration

Reference has been made in earlier issues of the Year Book to the general conditions of land tenure in the ACT. The freehold estate of all land in the ACT 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.

There have been a number of changes to land planning and administration as part of the move to self-government. Most of these flow from the *ACT (Planning and Land Management) Act 1988*.

Early in 1989, the Commonwealth Government established a National Capital Planning Authority to prepare a National Capital Plan and to ensure that development is appropriate to Canberra's National Capital character and functions. It also declared specified areas of land to be 'National Land' to be used by, or on behalf of, the Commonwealth.

The administration of all other land (Territory Land), including the granting of leases, is undertaken by the ACT Government.

The Act also requires the ACT Government to enact legislation to establish a Territory planning authority. Until this is done, local planning is being undertaken by the Interim Territory Planning Authority.

Leases of land for residential, commercial and other purposes in the city area are usually granted under the *City Area Leases Act 1936*. Some special leases for other purposes (such as diplomatic sites or churches) are granted under the *Leases (Special Purposes) Act 1925* or the *Leases Act 1918* for short term land use. Some areas outside the city area are leased for agriculture under the *Leases Act 1918*. These include areas not immediately required for development in the short or medium term.

Parks and Conservation

The ACT Parks and Conservation Service manages open space, natural and cultural resources and public sport and recreation facilities throughout the ACT.

The aims for all nature reserves in the ACT are to:

- maintain natural ecosystems and landscapes and protect sites of prehistoric and historic significance; and
- provide opportunities for recreational, scientific and educational use of these resources consistent with their protection.

Urban Parks

Since its establishment, Canberra has been developed as a garden city. The area of developed landscape increased by 3.8 per cent in 1989–90 to 5,284 hectares. Management of urban areas included newly developed areas in the town of Tuggeranong and redevelopment of ageing landscapes in the older suburbs and surrounds of the old Parliament House.

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 1989–90, 433,068 trees and shrubs and 222,600 bedding plants were produced.

The Horticultural Services Unit provides advice and tests turf, grasses, trees, shrubs and new products and techniques for application in the Canberra environment.

Floriade

Floriade, Canberra's spring Festival, has taken place each year since its inception in the Bicentennial year. It consists of floral displays and a theatre and arts program.

Namadgi National Park

In June 1984, the former Gudgenby Nature Reserve (62,000 hectares) and part of the Cotter River Catchment (32,000 hectares) were combined to form a new national park. It is known as Namadgi and covers 40 per cent of the ACT. Namadgi shares a common boundary with the Kosciusko National Park (520,000 hectares) 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 Territory with a sub-alpine climate. Habitat ranges from grassland on the valley floor through woodland and mountain forest to sphagnum bogs, heath swamp and alpine woodland. Several peaks rise to over 1,800 metres above sea level and include Mount Bimberi, the highest peak in the ACT.

Tidbinbilla Nature Reserve

The Tidbinbilla Nature Reserve (5,515 hectares) is located 43 kilometres 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 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, 30 kilometres of nature trails and a comprehensive information service are provided for approximately 120,000 visitors a year.

Canberra Nature Park

Canberra Nature Park (approximately 4,600 hectares) is made up of the numerous hills and ridges in the urban area of Canberra. These hills were an integral part of the original Walter Burley Griffin design for the 'bush' capital. There are over 20 separate areas of Canberra Nature Park each with its own character and values. The more prominent areas include Black Mountain, Mount Ainslie, Red Hill and Mount Taylor. Canberra Nature Park is very important for education and in providing wildlife habitats and corridors throughout the urban area.

Black Mountain

The Black Mountain Reserve (521 hectares), 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. Black Mountain Reserve is part of a number of hill tops and ridges which make up Canberra Nature Park.

Murrumbidgee River Corridor

A corridor of land comprising 7,000 hectares along the Murrumbidgee River in the ACT is managed as a unit within the ACT Nature Reserve system. As well as areas of nature conservation, the corridor contains seven major recreation areas which attract over 700,000 visitors per annum for picnicking, canoeing, swimming, fishing and walking.

The corridor includes a habitat for rare plants and animals and a number of cultural features including the historic homestead, Lanyon, and records of aboriginal occupation.

Wildlife

Extensive surveys of the native fauna and flora of the ACT are continuing. Information obtained is used to appropriately manage the wildlife of the Territory. For example, collaborative research by ACT Parks and Conservation Service staff and scientists from CSIRO have developed techniques for the control of feral pigs in Namadgi National Park.

Land Care

The treatment of land degradation and prevention of future damage are the aims of ACT landcare programs. Some of the most serious gully erosion originated in the last century and this is now being treated. New development guidelines help prevent soil loss during urban development. Tree protection and soil and pasture management are being brought together under landcare programs for the ACT. These are being developed in cooperation with neighbouring NSW programs.

The Lake Burley Griffin Catchment Protection Scheme, a collaborative works program between the ACT Government, the State of New South Wales and landholders, is continuing with restoration measures being directed to the Molonglo River catchment.

The ACT is undertaking activities for the Year and the Decade of Landcare.

Library Services

Comprehensive library services are available to residents of the Territory through the ACT Library Service. A network of regional libraries is being developed, modelled on State library systems. A mobile library services the rural areas of Hall and Tharwa, retirement villages and nursing homes.

Other services include a home library service, material on spoken work cassettes, Braille material, large print material and material in languages other than English.

Forestry

Forestry field operations in the ACT 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 measures, extend to some 13,000 hectares of natural forest in the Cotter catchment and adjacent areas and the Kowan region. 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.

Forest management 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 and conserve wildlife.

The forest authority is charged with the management of some 30,000 hectares of land in the ACT. As at 30 June 1988, the total area of coniferous plantations—mainly of Radiata Pine—in the ACT was 161,780 hectares.

In 1988–89, there was no commercial production of hardwood timber from the ACT. The volume of softwood cut was 181,000 cubic metres. The total value of this unprocessed timber unloaded at the mill (mill door value) was $9.3 million.

Agriculture

Agricultural production is confined primarily to sheep and beef cattle with 116,851 sheep and 12,422 cattle on 252 rural leases on agisted Territorial lands. The ACT abattoir serves the southern tablelands region.

Fresh fruit and vegetables are imported to Canberra through wholesale fruit and vegetable markets, handling 156,000 tonnes per year. Inspections of wholesale and retail produce outlets and of ACT apiaries and fruit trees are conducted to maintain product quality and to prevent the spread of plant and apiary diseases and pests.

Communications

Ten radio stations currently broadcast in the Territory: 2CN, 2CY and ABC–FM of the national broadcasting system, four commercial stations, 2CA, 2CC, FM104.7 and KIX–FM, and three public stations, 2XX, 1PPP and 2SSS–FM.

Since March 1989, two additional commercial television stations began broadcasting on the VHF frequency. They are WIN–TV, based in Wollongong and Prime based in Orange. Their services add to those provided by ABC Television, Capital Television and the Special Broadcasting Service.

Transport

The private car is the dominant form of transport in the ACT, given the ACT's generally good road accessibility and high car availability. Based on 1986 Census data, Canberra has the highest number of vehicles per household of any Australian capital city (a mean figure of 1.51), and a high percentage (74.5 per cent) of commuters travelling to work by private motor vehicle.

Public transport within the ACT is provided by ACT Government owned buses and privately owned taxis. The bus service is based on a feeder network to town centres with express buses between interchanges at the town centres. On an average weekday over 100,000 passengers are carried on the bus system.

Canberra also has an extensive network of cycle paths.

Transport links between the ACT and the rest of Australia are provided by Canberra Airport, the rail line to Goulburn, and major roads to Goulburn, Yass, Cooma and the South Coast.

Education

The *Education Act 1937* provides for the compulsory attendance at school of children between the ages of six and fifteen years. Public schools are administered by the ACT Ministry for Health, Education and the Arts under the provisions of the *Schools Authority Act 1976*. The Act also provides for school boards which are representative of teachers, parents and the community.

The ACT Schools Accrediting Agency accredits courses and administers student assessment procedures for Years 11 and 12.

In February 1990, there were 16 government high schools in the ACT and 9 secondary colleges. High schools cater for Years 7 to 10 and secondary colleges for Years 11 and 12. In addition, there is a Year 9 to 12 school and a kindergarten-to-Year 10 school. Secondary students enrolled totalled 18,516.

Another 65 government schools provide courses at primary level in the ACT, three of these being in rural districts. The number of students enrolled in government primary schools at February 1990 was 21,867.

The 78 government preschools provide facilities for 3,965 children aged four before 30 April of each year. Full-time preschools operate eight half-day sessions per week.

There are four government special schools which cater for preschool, primary and secondary school-aged students with special needs. In addition, an annex of a mainstream primary school provides for physically disabled students. The total enrolment at these special settings in February was 450.

Fifteen primary schools and seven high schools offer programs for students who have a need for structured intervention in a small group setting because of serious difficulties in making expected educational progress. Special units for deaf children are available at three schools. Blind children also receive specialised support. Two schools cater for primary aged children with language and communication disorders.

High school, primary and junior primary students referred with severe behavioural problems attend special behaviour management support units.

Itinerant teachers also give assistance to mainstream classroom teachers for students with hearing, vision and behaviour difficulties.

Children below school age with learning, sight or hearing problems receive assistance from specially trained staff at preschools, a therapy centre and in their homes.

Special classes for students of non-English speaking background are available at most primary schools, high schools and secondary colleges. Three introductory English centres (two for primary, one for secondary-aged students) cater for migrant or refugee children with little or no English. Students attend for up to six months and then return to their neighbourhood schools.

In February 1990, there were 22 non-government primary schools in Canberra, eight schools offering both primary and secondary schooling and six schools with secondary grades only. There were 10,159 students enrolled in primary grades at non-government schools and 10,319 students in secondary grades.

Higher Education

Universities

The Australian National University was established by an Act of Parliament and is administered by a governing council. The Institute of Advanced Studies within the University is a centre of excellence in research and post-graduate training. 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 postgraduate training and research, and comprise the Faculties of Arts, Asian Studies, Economics and Commerce, Law and Science. The total student enrolment in 1990 was 7,430. The University has established a number of academic centres.

The Canberra Institute of the Arts (CITA) was established in 1988 through the amalgamation of the Canberra School of Music and the Canberra School of Art. The Institute provides multi-level education and training in the visual and performing arts covered by the work of its two constituent schools. The work of the Institute ranges from community activities supporting the arts in Canberra to the provision of professional courses to degree and postgraduate levels. In recognition of its dual role, CITA receives funding both from the Commonwealth and ACT Governments. The Institute has concluded an affiliation agreement with the Australian National University which is seen as a first step to amalgamation.

The University of Canberra, formerly the Canberra College of Advanced Education, is administered by a governing council constituted under an Act of the Commonwealth Parliament and offers courses in six schools—Applied Science, Communication, Education, Environmental Design, Information Sciences and Engineering, and Management. Courses have either a professional or vocational orientation. There were 7,800 students enrolled in 1990. The University has set up several research centres.

Continuing Education

The Centre for Continuing Education is part of the Australian National University and it aims to foster a 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.

Technical and Further Education

The ACT Institute of TAFE is a multi-campus, multi-discipline educational system catering for the vocational, educational and training needs of the ACT and surrounding region.

The Institute is a Statutory Authority operating under ACT legislation and headed by an Executive Director. It also has an Advisory Committee representative of private and public industry, unions, community, teaching and student bodies.

The Education Delivery Program encompasses the teaching operations of TAFE and comprises nine teaching schools in the broad discipline areas of Applied Design, Applied Science, Community Education, Construction Studies, Electrical and Electronic Studies, Engineering, General Studies, Management and Business Studies, and Tourism and Hospitality. This program is supported by specialised units such as curriculum, educational computing and corporate services.

In 1990, some 18,000 students enrolled in a range of some 300 courses, of varying duration, offered on a full-time or part-time basis at trade, certificate, associate diploma and diploma levels and in preparatory, remedial and non-vocational areas.

Vocational training

The *Vocational Training Act 1989* which was passed by the ACT Legislative Assembly on 27 June 1989, provides a framework for the development and improvement of vocational training in the Territory.

In particular, the legislation provided for the establishment of the ACT Vocational Training Authority which commenced operations on 1 September 1989. The authority replaces the ACT Apprenticeship Board. Its membership is tripartite with equal employer, union and government representation.

The Vocational Training Authority promotes training in both the public and private sectors, regulates vocational training and advises the ACT Government on training issues.

Tourism

Tourism is a key element in the economy, sustaining employment for some 9,000 people and generating about $450 million revenue a year—more than $1,500 for every ACT resident.

The official tourist servicing and marketing operation in the ACT is provided by the Canberra Tourism Development Bureau. The Bureau's main office is located in the

Jolimont Centre in the city and it also operates a Visitor Information Centre on the inbound land of Northbourne Avenue. Both offices are open seven days a week. The Bureau is represented by branch offices in Sydney and Melbourne.

The major attraction in Canberra is Parliament House. It is a superb drawcard for Canberra with more than 3 million visitors passing through its doors in the two years since its opening. It is playing a significant role in boosting the value of tourism to the local economy.

The National Science and Technology Centre, the National Aquarium and the new Parliament House round off Canberra's most important decade of tourism development, a decade which has brought forth not only the two other significant newcomers to the Parliamentary Triangle—the Australian National Gallery and the High Court—but also the National Film and Sound Archive, the Australian Institute of Sport, Cockington Green (the most successful private enterprise attraction), and overlooking it all, Telecom Tower.

To keep pace with its multiplying attractions, Canberra's accommodation industry has also flourished. More than a thousand new hotel and motel rooms were added between 1985 and 1989—a 40 per cent increase, in a wide range from family budget to grande luxe.

The Hyatt Hotel belongs in the latter category; a unique redevelopment of the famous old hotel that became the alternative meeting place to Parliament House in the early days of the 'bush capital'. In the 1989 National Tourism Awards, the Hyatt received two awards—runner-up in the International Hotel category and runner-up in the Restaurants in the Pursuit of Excellence category.

The 300 room Capital Park Royal opened in 1989 along with its neighbour, the National Convention Centre. The National Convention Centre has a seating capacity of 2,500 in the Royal Theatre, 3,000 in the Exhibition Hall and 800 in the Grand Ballroom. Its arrival heralds a new era for conferences and conventions in the national capital.

Industry

The aims of industry development in the ACT are the expansion of private sector investment and employment opportunities.

ACT employment growth for the past ten years has averaged 4.2 per cent per annum and is forecast to average about 2.8 per cent per annum up until 1995. The private sector accounts for nearly 50 per cent of all ACT employment.

The major industry sectors in the ACT are public administration and defence, building and construction, finance, property and business services, entertainment, recreation and personal services (including tourism), light manufacturing, wholesaling, retailing and printing.

Over recent years there has been little growth in public sector employment in the ACT, mainly because of reductions in the staffing levels of public service departments. Some of the most significant growth industries are the finance, property and business services which encompasses insurance, accounting, banking, superannuation firms, and engineering and computing consultants.

The building and construction industry suffered a decline in activity following the completion of the new Parliament House. However, a number of major public sector construction projects are expected to make a significant contribution to the level of building activity in the longer term, notably the Civic Square redevelopment.

The entertainment, recreation and personal services industry provides a wide range of services to the local community in association with sporting activities, restaurants, clubs, and other personal services. This industry is also significant as it covers most of the activities associated with tourism which is a major growth sector. Growth in this industry is dependent on population growth and changes in the demographic structure of the population.

The wholesaling and retailing industry is largely concerned with the provision of retail facilities in developing residential areas such as Tuggeranong and in the redevelopment and expansion of existing retail centres such as City Centre and Belconnen.

Opportunities for further growth are being examined in targetted industry sectors such as advanced technology and the printing industry which is the largest manufacturing industry in the ACT.

The ACT has a number of competitive advantages which attract firms including a well-educated workforce, expertise in research-intensive and design based industries, relatively cheap land, a quality lifestyle and environment and access to Commonwealth Government decision makers.

Mechanisms have been put in place to provide assistance for new business activity in the ACT which are designed to promote further employment opportunities. These measures include assistance with one-off establishment costs, training and other resource development programs, market feasibility studies and the direct purchase of land.

In addition to local industry initiatives, broader based projects which are likely to have an impact on the future development of the ACT as a place to live, work and do business are being examined. For example, the Very Fast Train project would provide an opportunity for industry expansion in the ACT by reducing the travel time between Sydney and Melbourne and by improving access to commercial and tourist markets.

Employment

Historically, ACT employment-related programs have tended to complement Commonwealth labour market initiatives. With the achievement of self-government, emphasis is now being placed on identifying and meeting particular ACT needs.

The primary objective is the provision of a range of employment-related services which ensure equity of access to all sectors of the ACT community. Specific target groups include:

- the long-term unemployed;
- youth;
- women wishing to enter or re-enter the workforce;
- people with disabilities;
- people of non-English speaking backgrounds; and
- others classified as disadvantaged.

Government Receipts and Outlays

Self-government was granted to the ACT on 11 May 1989 and the ACT Government presented its first Budget on 26 September 1989 for the 1989–90 financial year.

The ACT Government in 1989–90 was responsible for most of the functions normally carried by Municipal and State Governments. The main exceptions were the courts and police. Responsibility for the ACT Magistrate Courts was to be transferred to the ACT Government on 1 July 1990. From that date, police services in the ACT are subject to an arrangement with the Commonwealth. Responsibility for the Supreme Court may not be transferred until 1 July 1992.

The following table is a summary of ACT Government finances for 1989–90, including both the General Government and Public Trading Enterprise sectors. The table conforms to the definitions used by the ABS in the publication *Classifications Manual for Government Finance Statistics, Australia* (1217.0).

AUSTRALIAN CAPITAL TERRITORY: FINANCIAL TRANSACTIONS OF TERRITORY GOVERNMENT
($ million)

Economic transactions	*1989–90*
Current outlays	858
General government final consumption expenditure	673
Requited current transfer payments	51
Interest payments	51
To Commonwealth Government on advances	47
Other	4
Land rent, royalties and dividends paid	—
Unrequited current transfer payment	134
Subsidies paid to enterprises	32
Personal benefit payments	—
Current grants	102
To non-profit institutions	102
To local governments	—
Other current transfer payments	—
Capital outlays	191
Gross fixed capital expenditure	241
Expenditure on new fixed assets	231
Expenditure on second-hand fixed assets (net)	10
Increase in stocks	—
Expenditure on land and intangible assets (net)	–60
Capital transfer payments	7
Capital grants	7
To local governments	—
To other sectors	7
Other capital transfer payments	—
Advances paid (net)	3
To local governments	—
To other sectors	3
Revenue	1,021
Taxes, fees and fines	318
Net operating surpluses of public trading enterprises	57
Property income and other revenue	56
Income from public financial enterprises	—
Interest received	42
Other property income and other revenue	14
Grants received	590
Financing transactions	28
Net advances received	–45
Net domestic borrowing	24
Net borrowing from abroad	—
Increase in provisions	34
Other financing transactions	15
Deficit	–6
Net Financing Requirement	39

Source: ACT 1990-91 Budget Paper No. 4.

THE JERVIS BAY TERRITORY

The Jervis Bay Territory was acquired by the Commonwealth from New South Wales in 1915 under the Jervis Bay Territory Acceptance Act to make provision for the Seat of Government in Canberra to have access to the sea. The Jervis Bay Territory is a Territory in its own right, to which ACT laws apply insofar as they are applicable.

The Territory has an area of about 7,360 hectares including about 800 hectares of territorial waters in Jervis Bay. In 1971, 4,118 hectares were declared as the Jervis Bay Nature Reserve under the *Public Parks Ordinance 1928* and in December 1985 Bowen Island (51 hectares) was declared a reserved area under the *Nature Conservation Ordinance 1980*. On 14 March 1987, the Government granted to the Wreck Bay Aboriginal community inalienable freehold title over 403 hectares.

Other land uses in the Territory include the Jervis Bay Village, the Royal Australian Naval College at HMAS *Creswell* and the RAN airfield. A number of blocks fronting Sussex Inlet have been leased for residential or holiday purposes; these include historic Christian's Minde, the site of the first European Settlement in the area, dating from 1880.

NORFOLK ISLAND

General Description

Norfolk Island, discovered by Captain Cook in 1774, is situated approximately in latitude 29°02'S, longitude 167°57'E. 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 2,000.

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 the Arts, Sport, the Environment, Tourism and Territories as the responsible Minister. Since 1979, various additional powers have been transferred to the responsibility of the Norfolk Island Government and further progress towards self-government was made in 1989 with the transfer of a significant number of new powers.

The Office of the Administrator is financed from Commonwealth expenditure which amounted to approximately $486,700 in 1989–90. A further $384,000 was provided by the Commonwealth during the year for the restoration and maintenance of historic structures and $1,585,000 towards the cost of a water assurance scheme.

Economic Activity

The island's major economic activity 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 are in abundance and 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 air services to the island are available for those who seek a quiet holiday in surroundings of beauty and historic interest. At present, accommodation consists of flats and hotels as well as licensed and unlicensed guest houses. There were 23,201 tourist arrivals in 1989–90.

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. Clerical and trades positions are available to islanders in the Norfolk Island Administration. Very few people rely entirely on agricultural pursuits for their income.

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)

	1983–84	1984–85	1985–86	1986–87	1987–88	1988–89
			REVENUE			
Customs duty	1,104	1,373	1,833	2,008	1,902	1,881
Liquor service	423	439	578	614	611	632
Company fees	96	94	84	92	108	80
Postal operations	1,016	801	744	114	272	20
Vehicle registration and licence fees	113	117	124	128	136	132
Departure fees*(a)*	—	—	—	—	272	278
Public works levy*(a)*	—	—	—	—	249	263
Fuel levy*(a)*	—	—	—	—	142	167
Telecommunications*(a)*	—	—	—	—	185	185
Electricity service*(a)*	—	—	—	—	115	190
All other*(b)*	1,094	1,624	1,777	2,173	688	984
Interest on investments(a)	—	—	—	—	336	437
Total revenue	**3,846**	**4,448**	**5,140**	**5,129**	**5,016**	**5,249**
			EXPENDITURE			
Administration	1,451	1,669	1,770	1,245	1,343	1,193
Education services	627	627	927	755	880	865
Health and welfare services	469	514	552	627	611	619
Repairs and maintenance	467	571	706	830	777	774
Capital works and services	99	265	768	1,682	638	507
Miscellaneous services	312	312	431	501	509	996
Legislative Assembly	192	230	234	210	182	167
Total expenditure	**3,617**	**4,188**	**5,388**	**5,850**	**4,940**	**5,121**

(a) For the years 1986–87 and prior, these amounts had been included in the total of 'All other revenue'. *(b)* 'All other revenue' is made up of sundry classifications none of which individually exceeds $100,000.

Trade, Transport and Communication

Imports to Norfolk Island since World War II have risen in value from $65,000 in 1945–46 to over $23 million in 1988–89. The major proportion came from Australia and New Zealand. Exports in 1988–89 amounted to $2.8 million, with Australia and New Zealand as the principal markets.

A shipping company operates cargo services to Norfolk Island at approximately five weekly intervals, linking the island with Australia and New Zealand

A passenger and air freight service between Sydney and Norfolk Island is operated by East–West Airlines Ltd three times per week. Air New Zealand Limited provides a service three times a week to the island from Auckland. Flights between Norfolk Island and Brisbane are also operated by East–West Airlines once a week and by Norfolk Island Airlines two to four times a week.

There are approximately 80 kilometres of motor roads on the island. A substantial section of the population possesses 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. The Administration also provides a television service. A central ground station receives ABC and SBS services via the AUSSAT satellite which are then re-broadcast throughout the island.

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 1990 was 322.

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 provided by or under ordinance, sitting in chambers. The jurisdiction of the Court of Petty Sessions is exercised by the Chief Magistrate or any three Magistrates.

HEARD ISLAND AND McDONALD ISLANDS

Heard Island, about 43 kilometres long and 20 kilometres wide, is the largest of a group of southern Indian Ocean islands about 4,100 kilometres south-west of Fremantle. The islands 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 Island and McDonald Islands Act 1953* which also provides that Commonwealth laws apply when expressed to do so and provides for the making of Ordinances for the Territory.

In December 1947, the first of the Australian National Antarctic Research Expeditions (ANARE) set up a scientific station on Heard Island. Various scientific and 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. From 1985 until March 1988, a major new research program was undertaken on the island, mainly involving investigation of the Island's wildlife as part of international studies of the Southern Ocean ecosystem.

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 that name, was by ANARE expeditioners on 27 January 1971.

Heard Island is widely regarded as one of the last Antarctic habitats remaining free of introduced organisms and is thus of significance as a benchmark for ecological studies. In January 1988, introduction of the Environment Protection and Management Ordinance under the *Heard Island and McDonald Islands Act 1953* put in place the framework for sustained conservation of the islands.

AUSTRALIAN ANTARCTIC TERRITORY

An Imperial Order in Council of 7 February 1933 placed under Australian Authority all the islands and territories, other than the French Terre Adelie, south of 60°S latitude and between 45°E and 160°E longitude, a total land area of six million square kilometres, or the size of Australia less Queensland. 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 and between 136°E and 142°E longitude. The *Australian Antarctic Territory Act 1954* declared the laws of the Australian Capital Territory, so far as they are applicable and not inconsistent with any ordinance made under the Act, to be in force in Australian Antarctic Territory. The Act also provides that Commonwealth laws apply when expressed to do so and that Ordinances may be made for the Territory.

On 13 February 1954, ANARE established the first permanent Australian Antarctic station in MacRobertson Land at latitude 67°36′S and longitude 62°53′E. The station was named Mawson in honour of the Australian Antarctic pioneer Sir Douglas Mawson. A second Australian continental station was established in 1957 at latitude 68°35′S and longitude 77°58′E and was named Davis to commemorate Captain John King Davis, second-in-command of two of Mawson's expeditions and master of several famous Antarctic ships. On 4 February 1959, Australia accepted from the United States Government custody of Wilkes station which had been established two years earlier at latitude 66°15′S and longitude 110°32′E. Wilkes was subject to inundation by snow and ice and was closed on 19 February 1969 when activities were transferred to Casey, a new station built nearby. Casey was named in honour of Lord Casey, former Governor-General of Australia, in recognition of his long association with Australia's Antarctic effort.

Australian science in Antarctica deals mainly with the Antarctic ecosystem, the region's natural phenomena, and atmospheric and space studies. Disciplines include marine science, land based biology, meteorology, cosmic ray physics, upper atmosphere physics, glaciology and earth sciences.

In addition to its three permanent continental stations (a fourth permanent station is on the Tasmanian territory of Macquarie Island), Australia conducts its Antarctic science from summer bases at Cape Denison (in the eastern sector of Australian territory), the Prince Charles Mountains, the Larsemann Hills and the Bunger Hills, as well as temporary field camps in such places as Enderby Land, Scullin Monolith, Amery Ice Shelf and Law Dome.

In 1981–82, a program for redeveloping Australia's Antarctic stations began. It is now well advanced and the first of the new stations to be completed—Casey—was occupied in 1989.

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.

The Territory's administrative community, airport and animal quarantine station are located on West Island, the largest island, about 10 kilometres long. The Cocos Malay community lives on Home Island. The main atoll is low-lying, flat, 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 World War II 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 the Arts, Sport, the Environment, Tourism and 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 Cooperative Society Limited, also established in 1979, conducts the business enterprises of the Cocos people. The Cooperative undertakes 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 30 June 1990 was 603, distributed between Home Island (413) and West Island (190).

Transport and Communication

There is an airport of international standard at West Island controlled by the Administrator under licence from the Department of Transport and Communications. The Department of the Arts, Sport, the Environment, Tourism and 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, latitude 10°25′S, longitude 105°40′E. It is approximately 360 kilometres south from Java Head at the southern entrance to Sunda Strait, 1,312 kilometres from Singapore and 2,623 kilometres from Perth. Christmas Island covers an area of about 135 square kilometres. It consists of a central plateau varying in height from 250 metres above sea level at the eastern side of the island to 150 metres on the western side. Several prominent rises in the plateau reach 360 metres above sea level. 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 the only anchorage.

The climate is tropical, with prevailing winds coming from the south-east to east-southeast 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 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 provide an adequate supply of fresh water for the population and for the mining operation. The mean average temperature is about 27°C and does not vary greatly throughout the year.

Economy

The economy of the Territory has historically been based almost entirely on the mining and extraction of phosphate. In November 1985, responsibility for the mining operation was transferred from the Phosphate Mining Company of Christmas Island (a limited liability company wholly owned by the Australian Government) to the Phosphate Mining Corporation of Christmas Island, PMCI, (a statutory authority).

When it became apparent that PMCI could not operate within an agreed Government underwrite, the Government decided to close down the mining operation. A liquidator was appointed on 11 November 1987 to wind up PMCI. The mining operation ceased on 31 December 1987, although it was announced in February 1988 that the Government would consider proposals by private operators to recommence phosphate mining on the Island provided that certain guidelines were met, including that there be no further rainforest clearing.

On 1 July 1988, it was announced that negotiations would commence with Elders Resources Limited for the recommencement of mining operations on the island. However, following a successful appeal to the Full Bench of the Federal Court by an unsuccessful proponent, negotiations ceased.

On 2 November 1989, the Minister for the Arts, Sport, the Environment, Tourism and Territories announced that tenders would be sought from companies or consortiums interested in operating the phosphate mine on Christmas Island. The closing date for new tenders was 11 May 1990 and the new tender proposals are being considered.

Notwithstanding the recommencement of mining, the Government is actively encouraging private sector investment in new activities on the island to secure an economic future which is not solely dependent on mining. Several development proposals, including a major tourist hotel/casino project, are progressing.

The Government has recognised that the unique environment of the Island holds the key to its future development, in particular tourism. Several rare and endangered species of wildlife live on Christmas Island, the best known being the Abbotts Booby, an endemic sea bird which nests in emergent trees in the rainforest canopy. On 5 April 1989, the Government notified a major extension to the National Park. The Park now covers approximately 60–70 per cent of the Island.

Population

Some 1,200 people were residents of the island in 1990. The majority are Chinese with the remainder being mostly Malays and Europeans. There is no indigenous population.

Education

The Christmas Island Area School is run by the Administration. The school provides education from pre-school level through to Year 10 secondary level. It follows a locally developed curriculum aligned with that used in Western Australia. There are 247 students enrolled at the school. Senior secondary students (Years 11 and 12) in Western Australian schools receive assistance from the Administration.

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 and in earlier issues. On 1 October 1958, the island was accepted by Australia under 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 the Arts, Sport, the Environment, Tourism and Territories. The Administrator reports to the Minister and is subject to his direction. 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 *Migration Act 1958* was extended to the Territory from 23 January 1981, enabling all island residents to become Australian residents and to acquire Australian citizenship. A number of measures have since been taken to extend the same benefits and responsibilities to island residents as apply on the Australian mainland so that the islanders will be in no better or worse a position than their mainland counterparts.

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* received Royal assent on 30 May 1985. The Act provided for the introduction of full company tax and the Medicare levy, as well as the phased introduction of personal income tax on Christmas Island over a four year period from 1 July 1985.

The *Christmas Island Assembly Ordinance 1985* and the Christmas Island Assembly (Election) Regulations permitted Christmas Island residents to elect their first Assembly on 28 September 1985. Nine members were elected for a one-year term under a voting system similar to that used in electing Senators of the Commonwealth of Australia. The Christmas Island Assembly has responsibility for directing the Christmas Island Services Corporation in the performance of its functions.

Transport and Communications

A Joint Island Supply System (JISS) commenced operations on 1 February 1989. It was designed to provide a more efficient and cost effective shipping service to meet the needs of people living and working on both the Christmas and the Cocos (Keeling) islands.

An air charter arranged by the Department of the Arts, Sport, the Environment, Tourism and 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 Department also currently operates a fortnightly air charter between Singapore and the island.

The Territory has its own radio broadcasting station, police force, hospital, postal service and philatelic bureau. The VISTA communications system which provides an external telex and telephone service by INTELSAT satellite, and a back-up INMARSAT system, became fully operational on 17 October 1985.

CORAL SEA ISLANDS TERRITORY

The Coral Sea Islands Territory is situated east of Queensland between the Great Barrier Reef and longitude 156°06'E and between latitudes 12° and 24°S. The Territory comprises all the islands in a sea area of approximately 780,000 square kilometres. The islands are largely formed of sand and coral. Some have grass or scrub cover, but most are extremely small, with no permanent fresh water. A meteorological station, staffed by three people, has operated on Willis Island since 1921. The remaining islands are uninhabited.

In the 19th century many ships were wrecked in the area, and the reefs and islands are often named for the ships which foundered there. There are navigation aids on several of the reefs and islands. There are occasional tropical cyclones in the area. Meteorological data are relayed to the mainland from automatic weather stations located on Cato Island, Flinders Reef, Frederick Reef, Holmes Reef, Lihou Reef, Creal Reef, Gannet Cay and Marion Reef.

Six species of sea turtle nest in the Coral Sea Islands Territory, including the largest species in the world, Dermochelys coriacea which is regarded as one of the most endangered of the world's sea turtles. There are at least 24 bird species in the Territory; a number of these species are protected under Australia–Japan and Australia–China agreements on endangered and migratory birds. In 1982, the Lihou Reef and Coringa–Herald National Nature Reserves were declared to protect the wildlife in the Territory.

There have been a number of scientific expeditions to the region since 1859 and many specimens of flora and fauna are now housed in Australian herbariums and museums.

In 1969, the Coral Sea Islands became a Territory of the Commonwealth under the Coral Sea Islands Act. The Minister for the Arts, Sport, the Environment, Tourism and Territories in Canberra, is responsible for the administration of the Territory.

Aerial surveillance of the Territory is undertaken by the Royal Australian Air Force and by chartered civil aircraft. Regular visits are made to the islands by ships of the Royal Australian Navy.

THE TERRITORY OF ASHMORE AND CARTIER ISLANDS

Ashmore Islands (known as Middle, East and West Islands) and Cartier Island are situated in the Indian Ocean some 850 km and 790 km 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. Vegetation consists mainly of grass. The islands have no permanent inhabitants.

Great Britain took formal possession of the Ashmores in 1878 and Cartier Island 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. By amendments to the Act in 1938, the Territory was 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 Territory became a direct responsibility of the Commonwealth Government.

Responsibility for the administration of the Territory rests with the Minister for the Arts, Sports, the Environment, Tourism and Territories. Laws of the Northern Territory apply in the Territory insofar as they are applicable.

Birdlife is plentiful on the islands of Ashmore Reef. Turtles are plentiful at certain times of the year and bêche-de-mer are abundant. In recognition of the environmental significance of the area, the Reef was in 1983 given the status of a national nature reserve under the *National Parks and Wildlife Conservation Act 1975*. Regular visits are made to the Reef by officers of the Australian National Parks and Wildlife Service.

An agreement between Australia and Indonesia allows Indonesian traditional fishermen to continue to fish in some waters of the Territory. Since 1985, an Australian presence has been maintained at Ashmore Reef during the March to November fishing season to monitor the activities of visiting Indonesian fishermen.

The Jabiru and Challis oil fields are located within the adjacent area of the Territory.

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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.

LIST OF SPECIAL ARTICLES AND MISCELLANEOUS MATTER CONTAINED IN PREVIOUS ISSUES

This list refers to special articles and other significant matter which have appeared in previous issues of the *Year Book.*

The figures below indicate, respectively, the number and page of the *Year Book* to which reference is made. In cases where matter has been published in more than one previous issue, the volume and page for the more recent issue is given.

[1] *Also*—1955, No.43, pages 909–10; 1948, No.39, pages 905–6; 1938–39, No.34, pages 453–4; 1924–25, No.22, page 660.

[2] *Also*—1955, No.43, page 912; 1948, No.39, page 908.

[3] *Also*—1954–55, No.43, page 833; 1947–48, No.39, pages 977–8; 1938–39, No.34, page 451; 1924–25, No.22, page 695.

[4] *Also*—1955, No.43, page 911; 1948, No. 39, page 907; 1938–39, No. 34, page 452; 1924–25, No.22, page 659.

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